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Desert

THE MAGAZINE OF THE WEST

AUGUST 1964

50c

6 UNUSUAL TRIPS
SERPENT CAVE OF BAJA
DESERT SURVIVING AND DRIVING





AUGUST

PHOTO

CONTEST

WINNERS

MAIN STREET

Tom Myers

SACRAMENTO, CALIFORNIA

To capture the feeling of the California ghost town of Bodie, Tom Myers used infrared film and a wide angle lens for this exceptional photograph. Data: Leica 35mm, infrared film with deep red filter at noon, 21mm wide-angle lens, f8 at 1/30th.

CACTUS WREN HOME

Henry D. Teft, Jr.

DENVER, COLORADO

Caught at just the right time, the sun highlights this home of a Cactus Wren, giving it the appearance of an unruly coiffure. Data: Rolleiflex, f22 at 1/30th, Panatomic X, f3.5 Xenar lens.

PHOTO CONTEST RULES

1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.

2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.

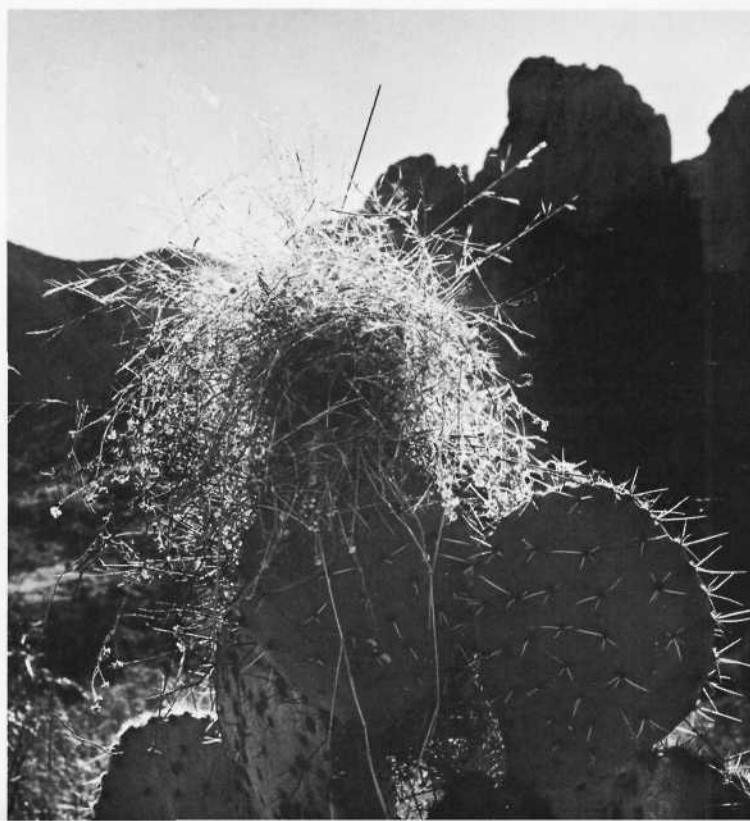
3—PRINTS WILL BE RETURNED ONLY WHEN RETURN POSTAGE IS ENCLOSED.

4—All entries must be in the Desert Magazine office by the 20th of the contest month.

5—Contests are open to both amateur and professional photographers.

6—**FIRST PRIZE** will be \$15; **SECOND PRIZE**, \$8. For non-winning pictures accepted for publication \$3 each will be paid. Although not part of the contest, Desert is also interested in viewing 4x5 color transparencies for possible front cover use. We pay \$25 per transparency.

Second Prize ▶



DESERT

CONTENTS

Volume 27

Number 8

August, 1964

This Month's Cover

Bristlecone Pine by John W. Kettl

4 Books for Desert Readers

8 Surviving and Driving in the Desert

By VINCENT ROTH

11 Land of Wandering Waters

By DOROTHY ROBERTSON

14 Me and the Santa Ana

By JOY CAPUTO

15 Buried Treasure Man Can't Dig

By RALPH PROUTY

17 I'll Take the Long Way

By ARTHUR ROULEAU

19 Submarines in the Desert

By MARIE VALORE

20 The Santa Rosas

By ROYCE ROLLINS

22 Bewitched by Baja

By CHORAL PEPPER

26 America's Cameleers

By JACK BRYSON

30 Alabates—the Prehistoric Treasure

By SAM ED SPENCE

33 Scorpions

By JOHN GOODMAN

34 Profile of Time

By LEON CALLAWAY

37 Ghost Town

By LAMBERT FLORIN

38 Desert Dispensary

By SAM HICKS

39 DESERT Cookery

By LUCILLE I. CARLESON

42 Letters From Our Readers

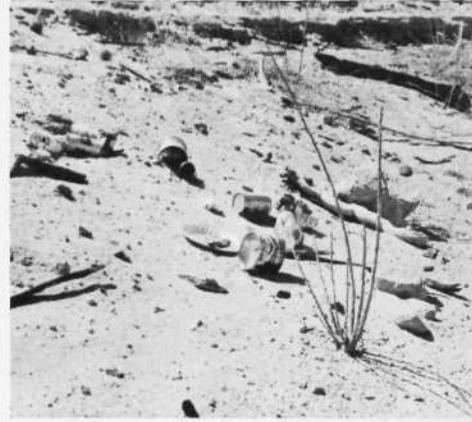
43 The Desert's Endowment

By MEL YOUNG

August Peppercorns . . . by Jack Pepper

Back in the "good old days" a prospector lived alone 25 miles from a small desert community and came into town only once a month for supplies. One day two other prospectors made camp five miles from the original old sourdough. The following day he appeared in town with all of his belongings on the back of his mule. Asked where he was going, he replied: "I'm gettin' away from all this crowded land. Why the population out my way has increased 200 percent overnight!"

For better or worse, the fact remains that the population of the western deserts is increasing, and will continue to increase along with the "western population tilt." Gone are the days when the desert belonged to "just us desert rats and God." This trend cannot be stopped or ignored. The majority of the new people are learning to love and respect the desert as do the pioneers. DESERT MAGAZINE plays an important role in showing newcomers how to appreciate the desert and, most important, how to respect our areas and preserve their natural state. We are constantly warning readers not to desecrate and destroy, but to marvel; not to mar, but to enjoy; to share and not to spoil and, above all, not to leave trash and litter. Yet there are criminals—and they are guilty of crimes since they are violating legal laws—who, with no regard for their fellow man, spill trash and litter across the desert, who throw tin cans into springs and who evidently derive a sadistic pleasure in the destruction of plants and wild life. These people, along with the egotistical perverts who deface pre-historic Indian writings and scratch their names and love markings on rocks and cliffs, are not only criminals, but sub-standard humans with perverted minds.



Officers of the law and rangers cannot possibly cover all desert areas. We who love and respect the desert should help by reporting violators and disposing of trash when we find it left by these insane desecrators. DESERT MAGAZINE will help in any way possible and welcomes suggestions as to how we can keep our desert areas safe and clean.

AUGUST CALENDAR. Nevada continues to celebrate its 100th Anniversary with too many events to list. For times and places write to Nevada Centennial Commission, State Building, Reno, Nevada. Smoky Indian Ceremonials and Snake Dance, Prescott, Ariz., August 1. Old Spanish Days in Santa Barbara, Calif., August 12-15. 43rd Annual Inter-Tribal Indian Ceremonial, "Today's Greatest Living Tribute to the American Indian", Gallup, New Mexico, August 13-16. Hopi Snake Dance, on Hopi Reservation near Winslow, Arizona, last 10 days of August. (**Editor's Note:** If you want events listed they must be in two months in advance of date.)

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BRAND NEW!!!

The Backyard of Nevada

BY C. LORIN RAY

Written from notes and reminiscences over many years of living and wandering in Nevada. Relates experiences in Gerlach, Rhyolite, Silver Peak, Jarbidge and other out-of-the-way Nevada places. A truly unique book with all hand-lettered text and 38 full page drawings by the author. Official Nevada Centennial Year edition. Paper cover. Autographed. \$3.00.

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New Books For Desert Readers

THE DINOSAUR HUNTERS

By Robert Plate

A fascinating book, this dual biography recounts the lives of two sworn foes who probably had more in common than any other two men of their time.

Othneil C. Marsh, America's first professor of paleontology, was a product of poor parents with a rich relative. His uncle, the celebrated bachelor who endowed Yale's Peabody Museum, believed only in helping those who proved themselves worthy. After a retarded start, O. C. Marsh set about proving his worthiness by winning acclaim as a scholar. Because Yale offered a professorship for a paleontologist, Marsh focused his energies in that direction.

Edward D. Cope, the violent Marsh antagonist, was reared by a doting and rich father who encouraged intellectual activity. This young genius was recognized in a number of scientific fields and had had papers published by the Academy of Natural Sciences of Philadelphia by the time he was 18 years old. Unlike Marsh, his early struggle was not one of subsistence, but rather, one of morality. Darwin's theory of evolution challenged his intense religious beliefs and precipitated a climatic inner frustration he found hard to compromise.

Author Plate brings to his readers a lively account of these two scholars in a determined fight by each to win first place in a race for scientific recognition. Much of their warfare took place on Western plains where their fossil hunts were plagued not only by each other, but by Indians, stomping Buffalo, conniving guides, weather and fatigue.

One incident that surprised Marsh was the stir his work created in Salt Lake City. Whereas most religious groups stormed in protest at this fossil hunter whose discoveries of prehistoric horses in North America bolstered Huxley's theory of evolution, Brigham Young embraced him. After detailed questioning on the part of the Mormons, Marsh finally discovered the answer. It seems the Book of Mormon had been challenged for alluding to horses in America during the prehistory era when everyone who knew anything, knew that horses were introduced by the Spanish. Now, thanks to Marsh, Mormons could cor-

rectly retort that native horses had indeed existed in America long ago and had become extinct only recently.

Most of the dinosaur bones that add importance to our museums today were discovered, uncovered, and reconstructed under the direction of one of these two men. That they hated each other while working toward the same end is sometimes amusing, sometimes pathetic. Nevertheless, it spurred them to heights as well as depths and, because of it, these dinosaur hunters were as colorful and human as they were coldly scientific.

Published by David McKay Company, Inc., this hardcover 281-page book is available for \$4.95 and may be ordered from the DESERT Magazine Book Department.

THE OREGON DESERT

By E. R. Jackman and R. A. Long

There is no other book about the Oregon desert, even though desert comprises a good 25% of the state. But this book is more than just a good one about deserts (covering Idaho, Utah and Nevada as well as Oregon). Its chief talking point is its ability to portray Western backcountry life—human and animal, wild and restrained.

One of its authors, Reub Long, is a lifelong cowboy who thinks like a scientist and the other, E. R. Jackman of Oregon State University, is a scientist who thinks like a cowboy. They write of wild horses, cattle drives, desert animals, geological processes, desert people and desert lore, and both are dedicated conservationists.

Jackman recounts an incident that took place at a Grange meeting held to solve a problem created by a poor clover seed crop. One practical bachelor blamed the poor crop upon the large number of old maids. "They all keep cats," he said, "the cats keep mice in the fields cleared out; the skunks, unable to find enough mice to eat, turn to bumblebees for food; the bees pollinate the clover, hence, if we bachelors want good clover seed crops, we've got to marry these old maids."

Reub Long's humor is much like that of the late Will Rogers' and he has a knack for reducing a lofty phrase to a practical application.

NEW BOOK ORDER DEPARTMENT

By Choral Pepper

About statistics, he says: If you get to be 80 years old, you needn't worry because statistics show that a very low percentage of men die after 80. On thinking: Conversation is cheap; ideas are dear. They are seldom found in the same place. On self-pity: If you must be *sorry* for yourself, make it short. Regrets: Have no regrets if you've done your best, even if you failed.

Published by Caxton Printers, Ltd. this hardcover 406-page book is beautifully illustrated with both color photos and black and white. It compares in quality with much more expensive books, but is priced at \$4.95. May be ordered from DESERT Magazine Book Order Department.

ALL ABOUT CALIFORNIA

By Thomas B. Lesure

Retiring to California has almost become a national habit, according to author Lesure. More people in the retirement age bracket have settled permanently in California than in any other state.

Some of the better known communities Mr. Lesure recommends for retired living at a low cost with a favorable climate are Avalon, Carmel, Laguna Beach, Monterey, Palo Alto, San Luis Obispo, Santa Monica and Santa Barbara. Among the lesser known places, he recommends Costa Mesa, Dunsmuir, Escondido, Gilroy, Hemet, Kern City, Los Gatos, Napa, Pismo Beach, Santa Cruz and Santa Rosa. The author's favorite appears to be Avalon, a town on Catalina Island off the Southern California coast. There no auto is needed and the harbor is colorful with small boats and yachts.

For inland coverage, the book lists Palm Springs, among many others, but neglects Palm Desert, Morongo Valley, Idyllwild, Temecula and some of the lesser known areas that retirees find desirable. Nevertheless, the author's compilation was an ambitious project and well done. In addition to information concerning job possibilities, housing, and recreational activities, he suggests overnight accommodations, trailer parks, eating places and fishing and hunting areas. The prime purpose of the large, 105-page paperback is to enumerate pleasant retirement locations, but it also serves

The books listed below and those which will be added in future issues of DESERT MAGAZINE have been selected as outstanding volumes which we feel will be of interest to our readers. In establishing the DESERT MAGAZINE BOOK ORDER DEPARTMENT we have selected books for quality and interest rather than mass volume. All of the books offered have been reviewed in "New Books For DESERT Readers" or read by the editors of DESERT MAGAZINE.

Since prices prohibit billing expense please include a check or money order with all orders which will be filled immediately. California residents must add 4 percent sales tax.

ON DESERT TRAILS by Randall Henderson, founder and publisher of Desert Magazine for 23 years. One of the first good writers to reveal the beauty of the mysterious desert areas. Henderson's experiences, combined with his comments on the desert of yesterday and today, makes this a MUST for those who really want to understand the desert. 375 pages, illustrated. Hard Cover. \$5.00.

CORTES, By Francisco Lopez de Gomara, secretary to the famous conqueror of Mexico. A vivid narration of the exploits of Herman Cortes who combined diplomacy, cunning and military might to overcome his adversaries. 480 pages, illustrated. Hard cover. \$8.50.

GHOSTS OF THE ADOBE WALLS by Nell Murbarger, the well known "roving reporter of the desert." The author's just-published book is an intimate chronicle of Arizona's once-booming mining towns, stage stations, army posts, marauding Indians and fantastic human characters. 380 pages, illustrated. Hard Cover. \$7.50.

LOWER CALIFORNIA GUIDE BOOK by Gerhard and Gulick. The authors have revised the third edition to bring it up to date. Veteran travelers in Baja California would not venture south of the border without this authoritative volume. It combines the fascinating history of every location, whether it be a town, mission or abandoned ranch, with detailed mileage maps and locations of gasoline supplies, water and other needed information on Baja. 243 pages with three-color folding map, 16 detailed route maps, 4 city maps, 22 illustrations. Hard cover. \$6.50.

THE HIDDEN HEART OF BAJA by Erle Stanley Gardner. The noted creator of the best-selling mysteries of our time has written several books on Baja California and the desert areas of the West. With his talent of combining adventure and mystery with facts, the author takes you with him as he probes the mysteries of "The Hidden Heart of Baja" and tells how he discovered an archeological find of major importance thus opening up a new concept regarding cave paintings. 256 pages, illustrated with color photos of Indian paintings. Hard cover. \$7.50.

THE DESERT IS YOURS by Erle Stanley Gardner. In his latest book on the desert areas of the West, the author again takes his reader with him as he uses every means of transportation to explore the wilderness areas and sift the facts and rumors about such famous legends as the Lost Arch, Lost Dutchman and Lost Dutch Oven mines. 256 pages, illustrated. Hard cover. \$7.50.

THE OREGON DESERT by E. R. Jackman and R. A. Long. This book is a hard one to define. A single paragraph may be a mixture of geology, history, biography and rich desert lore. The only complete book about the Oregon desert, the material applies equally well to other deserts of the West. The humor and fascinating anecdotes coupled with factual background and unusual photos, including color, make it excellent reading material even for those who may never visit Oregon. 407 pages, illustrated. Hard Cover. \$4.95.

THE NORTH AMERICAN DESERTS by Edmund C. Jaeger. A long-time authority on all phases of desert areas and life, Dr. Jaeger's book on the North American Deserts should be carried wherever you travel. It not only describes each of the individual desert areas, but has illustrated sections on desert insects, reptiles, birds, mammals and plants. 315 pages, illustrated photographs, line drawings and maps. Hard Cover. \$5.95.

JEEP TRAILS TO COLORADO GHOST TOWNS by Robert L. Brown. An illustrated, detailed, informal history of life in the mining camps deep in the almost inaccessible mountain fastness of the Colorado Rockies. Fifty-eight towns are included as examples of the vigorous struggle for existence in the mining camps of the West. 239 pages, illustrated, end sheet map. Hard Cover. \$5.50.

ALL ABOUT CALIFORNIA By Thomas B. Lesure. The author has compiled a factual report on the attractions, cities and communities of California designed for "an auto trip or a vacation and for assistance to find a home or low-cost retirement in pleasant surroundings." It also includes a section on "Business Opportunities and Job Outlook." 104 pages, 8 1/4 x 11, durable paperback. \$2.00.

THE DINOSAUR HUNTERS, Othneil C. Marsh and Edward D. Cope, By Robert Plate. A dual biography of the first dinosaur hunters whose bitter rivalry split the scientific world for about 25 years but whose exploits of the 1870s and 1880s excited the public imagination and made dinosaurs a household word. Easy reading, the book is packed with action resulting from the intense feud between Marsh and Cope, both wealthy men who exhausted their fortunes in the arduous hunt for the creatures of the past. 281 pages. Hard Cover. \$4.95.

PUEBLO GODS AND MYTHS by Hamilton A. Tyler. In this book the author draws interesting analogies between Greek and mythological gods, not to show that one developed from the other, but to better explain the development and intention of Pueblo mythology. Then, like constructing the House That Jack Built, he goes on to illustrate associated ideas which gave birth to the gods. The fascinating final chapter relates Pueblo cosmology to contemporary Western thought. 313 pages, Hard Cover. \$5.95.

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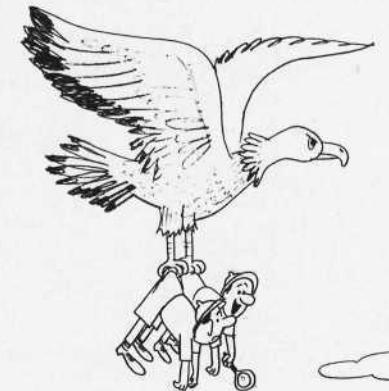
as an exceptional California guidebook. Historical and current local information appears accurate, but dining and lodging recommendations are questionable. In one instance he refers to a notoriously over-priced night club as a dining room with moderate prices. Another time he suggests a private club for overnight accommodations which is open to the public only upon recommendation of a member. Even so, we highly recommend this book for newcomers and travelers in California. Published by Harian Publications, \$2.00. May be ordered from DESERT Magazine Book Department.

MARINE MOLLUSCAN GENERA OF WESTERN AMERICA

By A. Myra Keen

Incorporating the author's previously published keys to the Gastropod and Pelecypod genera, this book also includes keys for three other classes of marine mollusks. Particularly appreciated will be the illustrations of the chitons, as there were none previously available to students. Compiled with names, descriptive formulae and detailed illustrations, this hardcover 125-page book is organized in such a manner that it will serve experienced malacologists as well as amateur collectors in accurately identifying specimen shells.

This is an adult book. Published by Stanford University Press, the price is \$4.50 and it may be ordered from the DESERT Magazine Book Order Department.



"Oh good! Now we'll get to see
his nest!"



SPICE YOUR SPANISH WITH DICHOS

By Ricardo Castillo

"Dichos" are the pungent Spanish proverbs which add so much color and logic to the conversation and thinking of our Mexican neighbors.

"Quien todo lo quiere, todo lo pierde."

He who wants all, loses all.

"Ser mas holgazan que la mandibula de arriba"

**To be lazier than the upper jaw—
meaning that the lower jaw is the
one that does all the work.**

"Dime con quien andas y re dire
quien eres."

**Tell me who you run around with
and I'll tell you what you are.**

"Bienvenidos los huéspedes, por
el gusto que dan cuando se van."

**Welcome your guests for the pleasure
they give you when they go
away.**

"Cuando seas el yunque resiste,
cuando seas el mazo golpea."

**When you are the anvil, endure.
When you are the hammer, strike.**

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Surviving and Driving



SURVIVAL ON THE desert is dependent solely upon water. Hunger plays an insignificant part by comparison. It is possible to die of thirst before one even becomes hungry. In only a few hours of 110°-115° weather, a person without a canteen can expire. People have left their broken down vehicles to hike 15 miles or more for help not knowing that 5.10 miles is the most one can cover on a hot day without extra water. Some have reached help, others have died. With a little knowledge of desert survival they might have lived. The following notes are written with the hope that they can help some "deserteers" in trouble.

It is first necessary to understand the need for water before we can discuss saving it. When the body heats up due to an outside temperature or exertion some means must be made to cool it. The only natural means is through evaporation of water (perspiration). When our body temperature rises above 98.6°F. the heart pumps more blood to the skin surface for cooling. At the same time, moisture (perspiration) is excreted through thousands of pores on our body. This moisture cools the skin and blood just like a water bag cools water.

On the desert the body accumulates heat in four ways:

Conduction—Contact with hot objects, such as leaning against hot rocks.

Convection—The flow of hot air over the body. This does cool but it takes moisture for cooling.

Radiation—By direct or reflected sunlight.

Metabolism—Through normal body functions. The body at rest

produces enough heat to bring a quart of ice water to boil in an hour.

This heat must be lost or body temperature will rise to dangerous levels.

High temperatures or heavy exertions will cause the flow of more perspiration and a more rapid flow of blood. If this perspiration is stopped the body temperature will rise abruptly, and death will follow.

As man dehydrates, his blood becomes more viscous or thickened and the heart is placed under a strain to circulate blood to the cooling surfaces. This strain can only be stopped by water, plenty of it. All people remain more or less dehydrated while on the desert even though they drink when thirsty. However, they usually make up their deficiency at meal times. For the best efficiency on the desert it is best to drink often, even when not thirsty—you need it.

Water is saved only by preventing the accumulation of heat. This is accomplished by:

Wearing loose, light colored clothes and a broad-brimmed hat. This can effect a 20% saving in water over wearing shorts.

Remaining out of direct or reflected sunlight from 7:00 a.m. to 10:00 p.m. during the warmer hours. This can effect a 40% saving of water.

Eating little or nothing requiring additional moisture for digestion.

Soaking the clothes or body with water. In extreme emergencies unpalatable or contaminated water from salt lakes or automobile radiators can be used.

Some of this information can be used for everyday living in desert

regions. It can make the hot days more livable and keep up your efficiency when you are not surrounded by refrigeration.

Desert Driving Is Easy, If You Don't Get Stuck

An experienced driver can drive almost anywhere on the desert with only a few modifications to his vehicle.

Before starting desert travel, inform a responsible person of your destination, route, and the time you will return, then adhere to the schedule, so if you become lost or stranded, searchers will look in the right area.

Make certain the radiator is full of water, preferably changed just prior to the trip so that, in case of emergency, it can be used as drinking water. A "bug" screen in front of the radiator is almost a necessity to keep leaves, flower-heads and brush from clogging the radiators if off-highway driving is anticipated.

Fill the gas tank with high octane gasoline, or be prepared to retard the spark on your engine. Once the engine is overloaded and begins to overheat, it will also begin to knock and lose power. High octane gasoline can prevent this knocking and subsequent loss of power. Regular gasoline is usually adequate for most cars, but performs poorest at high temperatures, low humidities or at low altitude, all of which are found on the desert.

Check your tires for tread. While "bald" tires are considered best for driving on sand because they do not "dig," they are more susceptible to damage. Nylon 4-ply tubed or tubeless tires are considered best where one is driving for long periods with soft tires. The tubeless tires do not lose air when driven with low pressures. The tubeless tires on the

in the Desert

by Vincent D. Roth

author's convertible and pick-up have been driven for many miles, including one trip of over 100 miles, with 12 pounds of air pressure in them, without trouble.

The amount of water necessary to take on a desert trip varies with the season, but it is advisable to have more than enough in several containers as a single container may develop a leak, break or turn over. A map is valuable, but use it with caution because maps of the desert are often inaccurate. It is good practice to take along a notebook to include mileage, turn-offs, and interesting features regarding the roads you travel. In case you find it necessary to walk out of an area, you can locate your positions by referring to your maps and notes. However, if you have trouble, it's best to remain where you are until help arrives.

Extra food, blankets and matches are insurance for those who intend to take a one-day trip, but get bogged down and remain for two or more. An ax, shovel and gloves are standard items for handling brush and digging in sand.

Before entering a sandy stretch of road, reduce the tire air pressure to 10 to 15 pounds, enough to allow the side walls to bow outwards slightly. Then drive through the sand with adequate speed, retaining momentum through excessively sandy areas, especially those with high centers. In the sandiest areas drive as fast as you safely can, keeping alert for any rocks or obstructions. There is much disagreement over the best type of transmission for driving through sand. Actually all have their advantages, the automatic transmission is best for pulling in sand without slipping the rear wheels and the 4-speed transmission is good for the same reason. The 3-speed transmission is best for

rocking the truck when in sand. Experience with any of the three is absolutely necessary and undoubtedly more depends upon the driver than on the type of transmission. Whichever is used, the power should be applied to the wheels slowly and evenly to prevent spinning. Sometimes it is necessary to allow the clutch to slip where a combination of power and slow speed is required.

Make all turns gradual and with as much speed as practical. In soft sand a sharp turn of the wheels will cause them to push into the sand rather than turn, while the rear wheels will begin to slip and dig as the car loses momentum.

Once the vehicle has lost momentum or the rear wheels begin to jump excessively, STOP! When first stuck most inexperienced drivers become frantic, step on the gas and rapidly dig the rear wheels down until the differential rests on the sand and the car cannot be moved except by towing, winching, or jacking it out of the sand. Relax and spend a little time determining why your car stopped. It might be that the front wheel dropped into a gopher hole, or the front wheels are in excessively soft sand. It might be best to back up, in this case. If you are determined to go ahead, straighten the front wheels, remove the sand from in front of all wheels and let air out of the tires till they bulge outward, but not so they are flat. Usually by this time it is possible to drive out of the hole you are in, applying power slowly to keep the rear wheels from slipping. If you cannot drive out, try rocking the car. Let the clutch out in low gear until the car starts to move ahead and then allow it to roll back, repeating this action till the car is rocking back and forth. When at the back end of a roll, shove the gears in low and

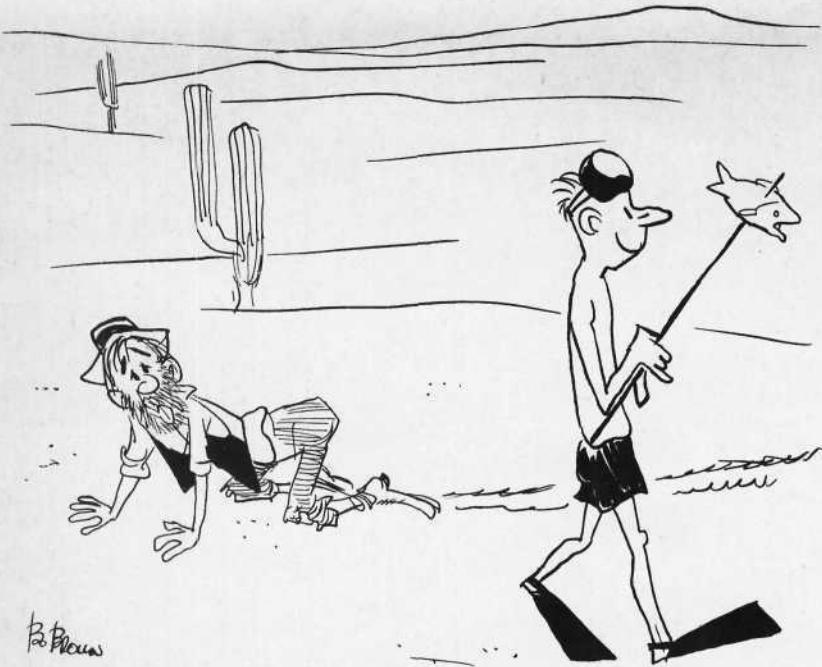
apply power slowly. The addition of a path of brush in the tire tracks will aid in giving the wheels traction. If the rear wheels bounce excessively, have someone stand on the rear bumper or place some weight over the rear wheels.

If a car is bogged down to the differential, jack up the wheels and fill in under the tire, using sand and brush, until the underparts of the vehicle are clear of the ground. An under-axle type of jack may be applied directly to the rim of the wheel when it is impossible to place it under the axle. After the wheels have been jacked out of the sand, add brush, rocks, grass or debris in front of the wheels for as far as necessary to pick up speed. After leaving the sandy area, pump up the tires to the recommended pressure.

For the serious desert driver, a sand buggy or a 4-wheel-drive vehicle is the best kind of transportation. However, for those without this specialized equipment, there are a number of relatively inexpensive modifications possible to make a standard car or a pickup "desert worthy." The first change is to larger tires. The largest size commonly used is a 8:20x15, which is quite satisfactory for desert driving, but the large size makes steering more difficult on paved roads. As a compromise, 7:60x15 tires for the front and larger tires on the rear have proven satisfactory.

A method used to widen the tires, usually used in conjunction with the large tires, is to have the rims split and widened with the addition of a band of steel. In this manner, the rims which are normally about five inches wide can be increased up to 11 inches. An eight or nine inch width appears to be the most satisfactory, since some drivers have had tire trouble with the larger widths. The





addition of these wider rims on the front wheels will cause additional spindle wear, so some drivers use standard tires and wheels in town, switching to their wider wheels only when driving on desert roads.

A non-slip differential, optional on some cars and trucks, is quite useful for desert driving. It is simply a set of gears which transfer the power to the wheel still having traction. On most cars, if one wheel spins, the other stops, or at least loses power.

A heavy-duty radiator is valuable for desert driving and should be ordered when purchasing a new car or pick-up. Overload springs are almost a necessity if any equipment is being carried to raise and support the rear end of your vehicle so that it doesn't hang up when crossing washes. Safety belts provide safety and comfort when driving on rough roads and enable the driver to keep control of his vehicle. A block and tackle with 100 feet of nylon rope is useful. Nylon towing

rope is light, but must be handled carefully since it is easily frayed or cut.

With "sand panels" it is possible to build your own road across the softest sand. A set consists of six panels about six feet long and 12" to 15" wide. Lay them on the road and as you drive forward, move the exposed ones at the rear to the front. Three people can move a car across sand quite rapidly by this method. The panels are most easily made from chain link fencing.

Never follow tire tracks blindly. Often a car can travel over a sandy area when it is damp, but will bog down seriously when the same area is dry. Salt flats should also be avoided until one is certain the flats are solid. Often the surface is dry and hard, but below this layer is soft, almost bottomless mud.

Never stop in a depression where an uphill run has to be made to get out. It is extremely difficult if

the sand is soft. Watch for ground squirrel or gopher activity. Their holes and tunnels will cave in easily, dropping your wheels 8 to 12 inches in the sand. This is especially bad if this occurs when one is almost stopped. Learn beforehand what size rocks your car can clear and pass over them slowly. Once a rock is hit, it often will tip on end and cause damage. In the event your oil pan is punctured, it is possible to plug the hole by applying a "compress" consisting of a folded handkerchief applied to the hole and tied with a rope to provide pressure. Don't drive over woody plants, as your tires may be punctured by bits of dry wood. Creosote is especially bad in this respect.

Dead batteries caused by leaving the radio, lights or ignition on can and do occur, and are a serious matter where one cannot get a push because of rough or sandy country. The engine can be started (except in cars with automatic transmissions) by jacking up one wheel and wrapping a rope two turns about the periphery of the wheel. Block the front wheels so they cannot move forward or back, shift to high gear, turn on ignition and pull the rope. It takes a powerful pull on the rope for one person, but two can easily spin the engine over. Do not wrap the rope around your hand in case the rope catches on the wheel once the engine starts.

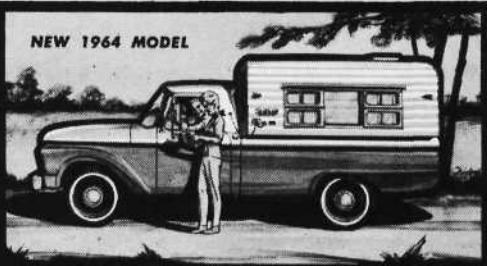
Desert courtesy should be practiced by everyone, if only with the hope that you might benefit from someone else some time. Refill holes after you have dug out your car, stop for anyone who has car trouble and drive slowly when passing parked or camped groups. And last, to preserve our deserts for future enjoyment, travel on roads whenever possible to prevent unnecessary damage to desert flora.

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Land of Wandering Waters

by
Dorothy
Robertson



SOME HIKERS park their cars at one of the short roads leaving U.S. 395-6 and hike up trails to the high Sierra's mountain lakes. But not us. We're the kind who go all the way. When my husband read in DESERT about a hiking trip in Utah, he took off his glasses, leaned back into his chair and said, "Every able-bodied American ought to backpack into the wilderness at least once in his life."

"Okay," I said, "Let's go!"

We went about it sensibly. The Sierras are closest to our Southern California home, so we plotted a 10-day, 80-mile excursion into them for this able-bodied adventure. Each evening we astonished neighbors by setting forth on a two-mile hike, always breaking into a run on the last quarter. By summer we were ready.

Because our loop trip included some decidedly rugged country to the Western Divide and back, we decided to fly to Temple Meadows over the Sierra Crest. A pilot named Bob White, who maintains an Aero Service in Lone Pine, accommodated the two of us in his plane for \$35 and within 20 minutes we had landed and were waving him a hearty farewell. On the cleared airstrip were two other planes flown in by parties who come here regularly to fish.

My pack, weighing 35 pounds, felt heavy at first, but an exhilaration which grew boundless with flower-starred meadows and fragrant pines soon had it floating along with my spirits. Up here the country is rugged. Wind-tossed pines are widely spaced, ridges bare. But the meadows sparkle with glacial streams meandering through wild iris, yellow, blue and white, and bushes laden with ruby currants. This is the heart of the summer deer country. It is also well-stocked with Owens Valley ranch cattle out to pasture.

The High Sierra Trail led us down through Ramshaw Meadows where, surrounded by gaunt, wind-scorched granite hills speckled with wind-bent pines, we decided to try our luck fishing, then make camp for the night. This was Golden Trout country. Here evolved the four famed species from the ancient family of Salmonadie, native to this particular region: the Kern or Gilberti Rainbow, South Fork Golden, White's Golden and the Roosevelt Golden.

Our first supper was dried potatoes mixed with water, cooked over the campfire and mashed, with golden trout 10 inches long and a fresh-gathered salad of watercress. Dessert was fresh-picked ruby currants. Camp chores over, we searched for arrowheads on the hillside slope. The area

At lower Funston Meadows, the turbulent Kern is wide and deep.



was strewn with patches of obsidian chippings. For hundreds of years the Piutes from Owens Valley on the east side of the Sierra had toiled over the steep passes to summer in this string of mountain meadows, hunting, fishing and pine-nutting. Our camp was upon one of their old campgrounds. Main east-west trails from the desert side follow the old Indian trails.



Naked crags of Mt. Muir and Mt. Whitney puncture the sky.

When the silver stars began to glitter through the pine needles, we zipped ourselves into our mummy-bags. Oh, this was the life! Sometime in the night I awoke, uneasy. Immediately above me, a hunk of cow breathed into my face. I froze. My husband said very softly: "Lie still and don't move!" Centuries later the cow moved away and I began to breathe again. "Just curious!" Al said smugly, and turned over on his side.

At dawn the shrill, hysterical voices of hunting coyotes awakened us. We lay listening to the blend of sound: keening coyotes, twittering birds, swift-flowing water and morning breeze. Our only worries were: shall we fish first or eat oatmeal cooked with mixed-dried-fruit-and-brown sugar? We were not bothered with weighty packages. We had pre-packed every bit of food, putting up each meal's allotment in individual plastic bags sealed with rubber bands. We brought some fresh fruit for the first day and we did carry two cans of bacon. You need some fat in the cold, high country.

The trail to Tunnel Meadow wound steeply up heavily bouldered volcanic country spotted with gnarled pines. Waterfalls cascaded down dull rocky escarpments. Soon we came to a stream above the falls where dam-happy beavers had built their lodges. The water was so clear we could see every darting fish, each grain of sand in the bottom.

Immediately above Tunnel Ranger Station, the headwaters of the South Fork of the Kern and Golden Trout Creek are but a few hundred feet apart. Here, in the late '80s, a group of South Fork cowmen began a tun-

nel to divert the Golden Trout waters into the South Fork waters. In true Western style, this venture was opposed, successfully, by the Kern County Land and Water Company. A shooting war was barely averted.

At the Tunnel Meadows Fork we turned west down Golden Trout Trail, crossing and re-crossing this creek at least five times. We passed Groundhog Meadows with its perfect little arcadian campground, then Little Whitney Meadows and the Tourist Pastures, where we glimpsed the only other people on this down-trail.

Throughout this scenic country, in mountain laps and dimples, emerald meadows crossed with innumerable little streams were the rule. We had been told that bears and other wildlife in this wilderness were harmless. Nevertheless, when I glimpsed a half-grown brown bear and his mother dining on blackberries a few bushes away, I did not wait to see how harmless they were.

This Golden Trout descent was really an experience. The 1000-foot drop was a scree-chute of switchbacks. Running springs had completely washed out the trail in several spots. We scrambled over the crumbling, slippery-wet slope balancing ourselves against the steep bush-held mountain-side. As our good deed for the day, we removed our packs and repaired the trail.

From a natural arch of brown lava, we saw the rainbow of Golden Trout's rushing waters cascading over the granite slope of Volcano Falls. Westward, the blue-misted cliffs of Kern River Gorge shimmered behind a veil of sunlight. I have never seen anything so beautiful. Arizona has its Grand Canyon, but California has the Kern River Gorge!

After breaking camp the next morning we closed the stock gates behind us at Lower Funston Meadow, and startled four grazing deer. Both river and feeder streams were swollen from melting snows. Some of these high streams were bridged with logs; over others it was necessary to find boulders above water to take us across. These west-side streams were deep and fast-flowing.

Beyond Upper Funston Meadows the gorge narrowed. Golden cliffs towered above knife-like passes in the great canyon. Then the trail crossed the Kern, now traversing the gorge on the east side. We came to 1,600-foot high Chagoopa Falls, a tumbling silver thread spinning off pine-clothed Chagoopa Plateau — named in 1881 after an old Piute chief. These falls—

there were actually three of them—were really impressive. Then a sign read: "Kern Hot Springs" and there a concrete tub beckoned with irresistible luxury!

Around 9000 feet the cool, whispering forest opened into sunlit glades. Manzanita clumps skirted the tall, straight pines, and the forest floor was soft and sandy and clean. Here we made camp.

At the Kaweah-Kern River junction we yielded right of way to two pack trains, then crossed an ascending slope. The Kaweah River shoots down the massive, precipitous granite walls of 12,000-feet high Colby Pass. South of Bighorn Plateau, the John Muir Trail meets with the High Sierra Trail. We switched trails, ascending Muir Trail eastward along rugged Wallace Creek Canyon. From this top-country above the formidable gorge, the Kaweah pinnacles unfolded into the misty blue western skyline. In every direction the panorama glittered with patches of snowfields, small, sparkling, incredibly blue tarns and frowning jagged peaks.

That night we camped at 11,000 feet but were snug in our mummy-bags. The western skyline grew increasingly red. Smoky clouds billow-

ed above. Forest fire! I knew panic. A trail crew hurried by on horses. They reassured us. The fire was a long way off; over in the Middle Fork country, safely across the great gorge.

Between-meal hunger we conquered with snacks of Hi-Protein chocolate-flavored tablets, non-melt chocolate bars, raisins and salted sunflower seeds—all nutritious and light-weight.

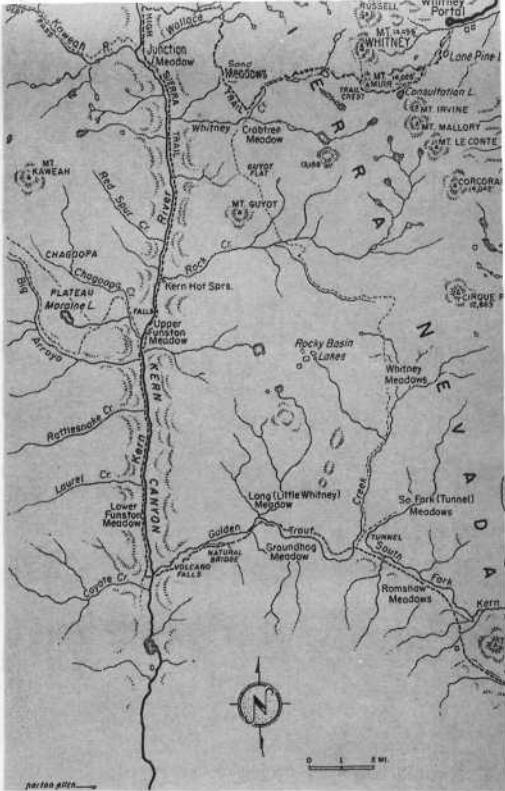
Above lavishly flowered Wallace Meadows the alpine winds blew cold. Now we could see the northwestward sweep of the Great Western Divide with its magnificent panorama of peaks, each over 13,000 feet.

The trail to Sandy Meadow, a sparsely grassed plateau, passed through twisted, wind-torn timber clinging stubbornly to the slopes. Crabtree Meadow, with its dancing, blue Whitney Creek, was a welcome sight after the grueling climb. That night we camped with a view of Mt. Whitney's naked, pinnacled flanks.

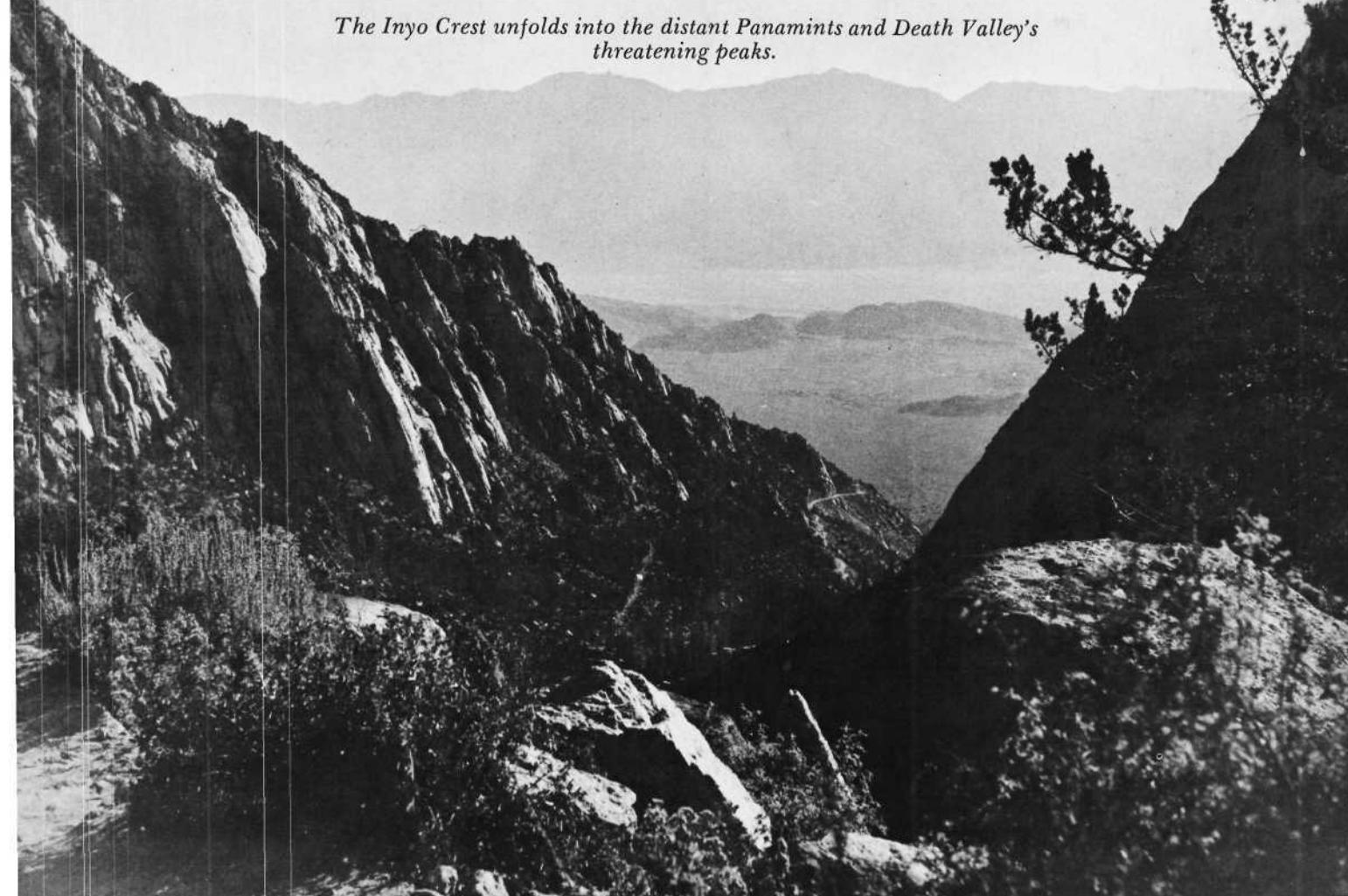
With no firewood above timberline, we cooked a potful of chili beans and saved some to carry with us.

Early next morning we began the climb to Trail Crest, 1500 feet above

(Continued on Page 36)



The Inyo Crest unfolds into the distant Panamints and Death Valley's threatening peaks.



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ME AND THE ~~SANTANA~~

by JOY CAPUTO

ASK A DOZEN people, "What is a Santa Ana Wind?" and you'll hear a dozen answers. As a native Southern Californian, I thought I knew all about these hot, dry winds that plague our locale. Glibly I tossed out pieces of misinformation about how the proper spelling was "Santana," how it was hot because it came from the desert, how other desert areas also suffered from "Santa Ana" winds. And so it was with chagrin that I found myself in error, not only regarding these three facets of the wind, but several others as well. I was, in the well-known vernacular, full of hot air.

When I first decided to check into this gusty question, I opened my large Webster's dictionary and found: Santa Ana—a strong, hot dry foehn wind from the north, north east, or east in Southern California.

I was astounded! Was it possible that I, of all people, could possibly be in error? And what was a foehn wind?

In a book called *World of the Wind* by Slater Brown, I learned that the foehn wind derived its name from a Latin word meaning South Wind. It was named many years ago in Switzerland where they thought it was peculiar only to certain valleys of the Swiss Alps, and the meteorologists of the day tried to explain its hot, dry characteristic by dreaming up a connection of currents sweeping across from the Sahara desert. Later, however, they discovered that this type of wind is found in almost every part of the world, always near a mountainous region, not always coming from the south, and in some instances passing over ice fields rather than deserts. After scientists solved the mystery of why the wind is hot and dry, the term foehn wind became a basic category for all wind, regardless of its local name, which derives its heat in this most unusual way. For it is not the sun nor the desert sands which give the foehn its warmth. The foehn wind generates its own heat.

When air expands, it cools, and when it compresses, it heats. This simple law of nature is alone respon-

sible for the unique quality of the foehn; for the wind, as it descends the sides of the mountains, compresses the air and the temperature rises. Aside from damage caused by the velocity of the wind, there is also created a serious fire hazard, and there seems to be a direct bearing on the temperament of the unfortunate recipients of the hearty blow. In 1959 six fire fighters were burned to death and 20 others injured when a Santa Ana wind trapped them southwest of Elsinore.

The Santa Ana is a foehn wind which sweeps through San Bernardino Valley by way of Cajon Pass. Besides being hot and dry, it is also laden with dust.

In *California Deserts* by Edmund C. Jaeger, it is noted that Santa Anas often come abruptly following rainstorms. Being very dry, they immediately dissipate the moisture bearing clouds. Because air currents are descending, turbulence or vertical convection, so essential to cloud formation, ceases.

As a final blow to my erroneous thinking, the Encyclopedia Americana lists the following: Santa Ana (Southern California)—a foehn type wind, a hot dry northerly or north westerly wind, blowing from the Mojave Desert into the Los Angeles Basin; a winter phenomenon responsible for very warm winters in Southern California.

I surrender. I capitulate. I apologize to the mighty Santa Ana! But even as I proved myself wrong right down the line I couldn't help but feel a wry amusement at a statement from *World of the Wind*. This book was published in 1961 and in describing the effect of the Santa Ana upon the residents of the area, Mr. Brown quotes a contributor to the Weather Bureau who states that when the Santa Ana blows, the natives are completely prostrated by the heat and "lie on the floor like wilted cabbages."

In a thoroughly chastened mood, I say to you, "Fellow wilted cabbages, arise! Cast off the shackles of the Santa Ana. It's time we got a little foehn out of life!"

THE

BURIED TREASURE NOBODY CAN DIG

BY RALPH PROUTY

FORTY-ODD MILES east of Flagstaff there is an enormous cavity in the Arizona desert. This stupendous scar in the earth's skin is located in Coconino County. It is roughly a mile in diameter and 600 feet in depth.

This vast pit marks the spot where between 25 to 50 thousand years ago a meteor collided with the earth. Its meteoric metal would yield \$50.00 a ton—a fortune beyond belief. And yet, science has not yet figured out a way to get it.

What happened when the meteor struck? Dr. Harvey H. Nininger, curator of the Denver Museum and a noted authority on meteorites, says: "The human inhabitants of the region, if any such existed, probably noticed a brilliant light in the northern sky, if the meteor appeared at night. If the fall was in the daytime, such a large meteor would be visible. The sound of its passage would not

be heard in front, as it traveled ten to twenty miles per second, much faster than sound."

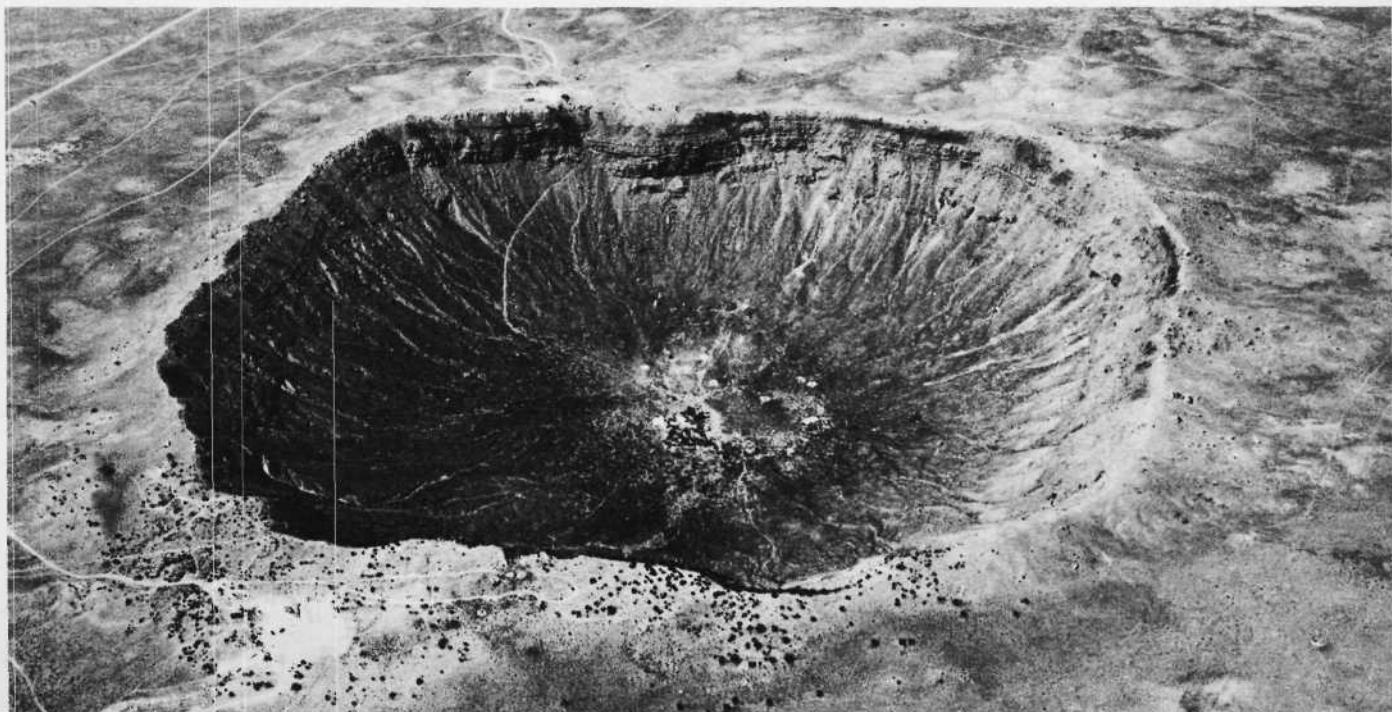
Since the natives would not have been able to hear the sound of the meteor, would they have tried to flee? Dr. Nininger answers thus: "These inhabitants undoubtedly were seeing their last sight. When the giant meteor struck, the resultant concussion extinguished all life within at least fifty miles. A wall of intensely heated air rolled out in all directions, scorching the earth's surface and burning everything combustible."

Indians of the region still relate legends of a wicked god who was thrown out of heaven. Falling to the earth in flames, he landed so hard that he bored a hole deep into the earth. Meteor Crater, the legend goes on, marks the place where he fell. The Indians have many superstitions about the crater. To this day they

will not go near it, nor will they handle a piece of iron they know to be from it.

While the Indians had known about the crater for hundreds of years, its existence was first revealed to the white man in 1871, when some army scouts visited it. Mexican sheep herders in the vicinity gave iron fragments from it to the first railroad contractors to come through. Some of these fragments were sent East in 1886 and were for the first time identified as meteoric material.

Once the white man knew what had caused the great holes in the desert, he was not slow to think about turning it into money. Scientists estimated that the meteor weighed somewhere between one million and ten million tons. That quantity of high-grade ore would be worth several fortunes. The mystery is that no one has ever made so much as a nickel from mining the meteor. Why?

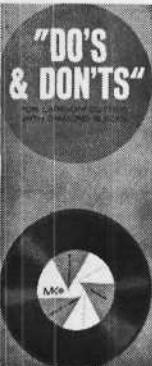




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The first interest in mining the crater was displayed by an engineer, Donald M. Barrington, who filed a claim shortly after 1900. Actual efforts to locate the meteor itself began in 1905. The first test holes, sent down from the crater's center, showed absolutely nothing. This development puzzled everyone until a scientist figured that the meteor had struck at an angle and therefore would most likely be found at one side of the depression.

Another observer, noting that the south rim was higher than the north rim, theorized that the comet had traveled from north to south. Assuming that it had struck at an angle of approximately 45 degrees, it should have come to rest somewhere beyond the south rim. When drilling was shifted from the center of the crater to the south edge, a hard metallic mass was struck at 1,376 feet. It was the meteor at last!

Assays showed that the metal consisted of 93.3% iron and 6.4% nickel. This is nature's equivalent of armor plate. It is almost the identical formula of the hardest steel alloy man has been able to develop. It is so hard that it cannot be blasted, chipped or drilled into fragments in the approved techniques of mining. It has to be cut with an acetylene torch.

One research company in New York secured a six-pound lump of the meteor and sawed it in half on their cutting machine. The cut was as smooth as marble and resembled a highly polished surface of nickel or steel. It was so hard, however, that they could not get a drill through it. They gave up, reluctantly, since the meteoric metal would have yielded about \$50 a ton.

Since 1905 a score of unsuccessful shafts have been sunk. Over half a million dollars has been spent on test boring and drillings. However, not only was the metal too hard, but the drillers ran into quicksand and water, which rendered further drilling well-nigh impossible. The difficulty of breaking off pieces of the meteor was demonstrated by the number of drill bits that were broken in the process.

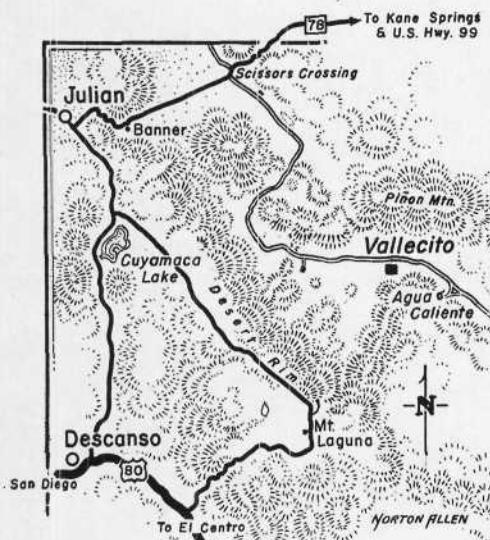
So there the meteor still rests, a fortune buried in desert sand. Yet, if there is no feasible way to get at it, no means to break it up, what is to be done? Unless someone comes along with a revolutionary and economical means of mining the meteor, it is likely to remain there for another 25,000 years.

///

Desert's

trip of the
month

We'll Take the Long Way



by Arthur Rouleau

WE'RE NOT for a physical factor rendering it impossible, callous motorists might describe Julian as a "one-blinker" — one blink and you're through it. However, if approached from the north from Highway 79, a blink at the wrong moment and the motorist would miss the sharp right turn on Main Street and wind up in a grassy meadow.

Midway between Mt. Palomar and Mt. Laguna in eastern San Diego County, Julian is surrounded by Indian reservations and historic gold mines, some still in operation. The town boasts a population of 500,000, a figure, however, that includes its suburb, San Diego, 60 miles southwest via California Highways 79 and 80. Within its actual town limits, reside something under 500 persons, although the residents of lofty perches and valley hideaways, to a radius of three miles or so, swell the figure to a neat 1,500. But don't scoff at its size. Julian just missed becoming the San Diego county seat by a mere three votes when that contest was held years ago.

My wife, Barbara, and I left our home early on a Friday morning to explore the Julian country. Traffic was light and we rolled along, enjoying every minute of the drive. At Temecula we turned onto 76 and speculated on scenes of the past. The Butterfield stages passed this way.

A few miles north of Julian, at Wyanola, a one-room country school attracted us and we stopped for pictures. The Spencer Valley School, one of the few such schools remaining in southern California, still conducts classes as it has since 1870.

Mrs. Evelyn Stanley, who teaches its 12 students in six grades, invited us in to observe the school in action. Noticing a large heating stove in the front of the room, I asked Mrs. Stan-

ley if it didn't feel good to stand close to on a cold, snowy day.

"Yes," she replied, "but do you remember the scent of hot wet wool? I'm treated to it each time my children drape their wet coats and mittens near the stove to dry."

But don't feel sorry for them. The kids love it and so does she, and she has no problems with absenteeism or failing students. We left this dedicated teacher and her charges with the feeling that the popularly accepted educational equation (blank square feet, plus blank text books, plus blank athletic equipment, plus blank cultural extras, plus blank degrees, plus one child equals an education) ain't necessarily so.

As we entered the town on Main Street, the library building caught our eye. Along the edge of its tile roof a sparrow population had settled en masse and from each open end tile peeked a nesting mother. It seemed impossible to maintain a decorous household, however, as each apartment looked alike and the male sparrows couldn't seem to remember which one was which. This caused quite a commotion on Julian's Main Street, but thanks to the birds we met Mrs. Myrtle Botts, the librarian.

From her and from material she made available to us, we learned something of Julian's history. At the close of the Civil War, five Confederate Army veterans, Drury, Frank, and James Bailey, and their cousins, Michael and Webb Julian, left their Georgia homes in the desecrated south to seek new homes and fortunes in the West, if they could find them.

In Julian country they found both.

"This is the most beautiful place I've seen since I left home. Let's each of us locate a home here." Drury Bailey said, when they reached the valley in 1868.





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Bickers, in a newspaper interview, was quoted as follows, "On Sunday, the 20th (February, 1870), wishing to be alone, I started for a walk. About 200 yards from the camp I saw a track which I took to be that of a bear. After following some distance, I turned back toward camp and discovered a bunch of quartz rocks about six inches in diameter and lying near this, a rock weighing some four pounds. I picked it up and found free gold on it."

They had prospected first in southern Utah, then following the promise of richer areas elsewhere, worked across the mountains and deserts en route to San Diego. A shortage of supplies, while in the Temecula area, prompted them to send James to Old Town (Old San Diego) for the needed provisions. Returning, he camped for a night with a man named Harrall who suggested that they prospect in the mountains in which he lived. This they did and thereby hangs our tale.

A prospector named Fred Coleman found placer gold near the confluence of the Julian and Wyanola creeks in 1869, but it was the discovery of gold in hard rock that started the Julian gold rush.

The most frequently repeated story is that 13-year-old Billy Gorman, gath-

ering firewood for camp, noticed a pile of white rocks containing yellow specks. He took a chunk of the rock to his father and asked if it was gold. Eureka! It was.

Another story is that the first quartz claim in what became the Julian district was filed by Drury D. Bailey in February, 1870. It turned out to be a pocket claim and was abandoned. Five days later H. C. Bickers recorded the discovery of the George Washington Mine, the first real producer.



He filed a claim and the rush was on. Drew Bailey filed a homestead to lay out a town in the north end of the valley. At a miner's meeting the town was named Julian, with Mike Julian as recorder for the mining district. By 1894, twenty major mines were operating in the district. A few still operate, but the owners of the others await that long-hoped-for higher price of gold.

Apple Days, usually held the last weekend in September or first of October, to celebrate the fruit harvest and Julian's mining hey-day, draws thousands of visitors each year. There is also a museum with exhibits of old mining equipment and photos that attract visitors. From Inspiration Point, just south of town, there's a thrilling panorama view of the Anza-Borrego Desert where the Banner Road (California 78) winds down through lush canyons and across the desert floor to Indio and the Salton Sea. Here the Fort Knox Gold Mine still operates and receives visitors.

Julian, with its pine-scented air and unlimited horizons, offers a spring, summer or fall paradise for hot desert dwellers. And for city people it's a good place to avoid traffic and crowds.



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SUBMARINES OF THE DESERT

BY MARIE VALORE

IT WAS MID-SUMMER in 1923 when my father came to Coachella Valley. The fronds of the giant Washingtonia Palms along the mud foothills of Chocolate Mountain hung brittle and dry. Clumps of devil grass popped from the sun-baked sand.

The inhabitants of this lower desert region of Southern California suffered miserably. Temperatures often rose to 120 degrees in the shade, and there wasn't much of that.

My father pulled his creaking jalopy into Indio and, almost in panic, requested escape from the searing heat. He was directed to a hotel near the railroad tracks. Or, at least, it was called a hotel. In reality it consisted of only a small group of one-room, oddly-shaped houses. These, with their rounded roofs, resembled small New England barns. Their walls were made of tin and a hard fiber and their roofs were covered with burlap or palm fronds overhung by a sort of trellis.

When asked why the houses were so constructed, the proprietor explained that they were called "submarines" and were the only artificially cooled houses in America.

"How do they work?" my father asked. "and why submarines?"

"We call them submarines because they're usually under water," the owner answered. "When the tops are wet down, it makes the inside of the

rooms as much as 15 to 20 degrees cooler. As the water evaporates, it absorbs the heat inside."

"Impossible," my father retorted, but in his misery he was willing to try anything. Paying the man 50c in advance, he moved in while the owner proceeded to wet down the outer burlap walls with a hose. Soon the room was, indeed, cooler.

Grateful for the marvelous ingenuity of man, my father continued his journey, but before leaving Indio resolved that someday he'd return and make it his home.

The first submarines were built by Pop Boomer in 1921 to house the Southern Pacific Railroad workers. Air-cooled rooms then rented for \$25 per month. Pop Boomer probably conceived this revolutionary idea from studying the food coolers of early settlers, which in turn, were patterned after the wet, clay ollas used by desert Indians. The coolers consisted of burlap covered boxes with a can poked full of holes resting on top. Water, poured into the can, slowly dripped down its sides to keep the burlap moist. Perhaps Bob Boomer had dreamed of curling up in a cooler when he was struck with his brilliant idea.

Today one has only to flip a switch to cool his home, but this might never have happened had it not been for ingenious desert pioneers like Pop Boomer, who introduced submarines to the desert.

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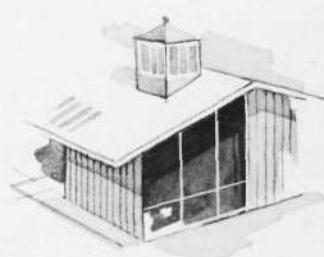
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about last Indian *A Sunday in*

IT WAS HOT. The pool deck scorched our feet. Air-conditioning provided comfort inside, but we'd spent all week inside. We wanted out for a change, in the light of day.

"What did people on the desert do before air-conditioning?" my husband sighed.

"Randall Henderson used to hike in the Santa Rosas," I recalled, having recently reread one of his early articles in a 1939 DESERT.

Without another word, we hopped across the searing patio to the house, packed a lunch and put on jeans.

A Santa Rosa Mountain sign indicated the turn-off from the Palms to Pines Highway. Opposite it and about a mile toward Palm Desert is the public Pinyon Flat Campground. A number of campers and travel trailers were parked there, but the dirt road to the Santa Rosas, almost hidden by ribbonwood bushes, was free of traffic. As our road climbed higher, the thick ribbonwood growth changed to a picturesque terrain strewn with giant-sized boulders. We passed an abandoned mine, which didn't amount to much, and then wound upward into an area of live oak. Already the air grew cool enough to turn off the air-conditioner.

Stopping at a cedar-studded crevice between two barren peaks, we indulged in a veritable orgy of sniffing. We'd smelled nothing but heat waves for so long. It was great to stretch our limbs, unsnarl muscles cramped from days of inactivity and feel cool earth and stone beneath our feet. Rocks worn smooth by a cascading waterfall cut a slash through the thick cedar, but at this time of year the springs that fed it were dry. We had no idea how much farther the road would

carry us, but knew this wasn't the end.

Randall Henderson had written about Steve Ragsdale's cabin atop Santa Rosa Peak and about the adjacent taboo-ed Toro Peak, which the Cahuilla Indians feared to climb. Toro was his own favorite summer spot, in those hot summer days with no artificial relief. He would camp there overlooking a panorama that stretches as far south as the peninsular range of Baja California. It has been reported elsewhere that on a clear day one can see Catalina from Toro Peak, but there are few, if any, high spots in Southern California that don't make that claim and most of them have never known a day so clear!

Our wonderful cedar crevice gave way to desert again as we climbed the serpentine road. Then we came back into pine. Two young couples strolled along the road. We thought they'd had a breakdown and were walking back for help, but from a sheer dip they pointed below to a lovely camping spot beside a spring where they'd left their automobile. This is reached by an off-shoot from the main road that juts to the left slightly beyond where another off-shoot makes a complete reverse on a higher level and leads to the Ragsdale cabin. We followed the one to the right. It is 9.3 miles from the highway.

In a treehouse on the tip-top of Santa Rosa Peak that Steve Ragsdale, perhaps, built to raise the altitude of his peak to that of Toro, we met a resting hiker. Paul Ricci, a physics instructor from Fullerton College, still had enough steam after a hike to Toro Peak to ascend the steep tread of this lookout. Sturdy enough to withstand an earthquake, Ragsdale's treehouse, which could be called a

TO
MAN
AND
TREE
I SAY TO
THEE
BEWARE OF
IT'S
KILLER

mines and taboos and the Santa Rosas

by Royce Rollins

"cloudhouse," must be the envy of every boy who sees it—and it makes every man who visits it feel like a boy.

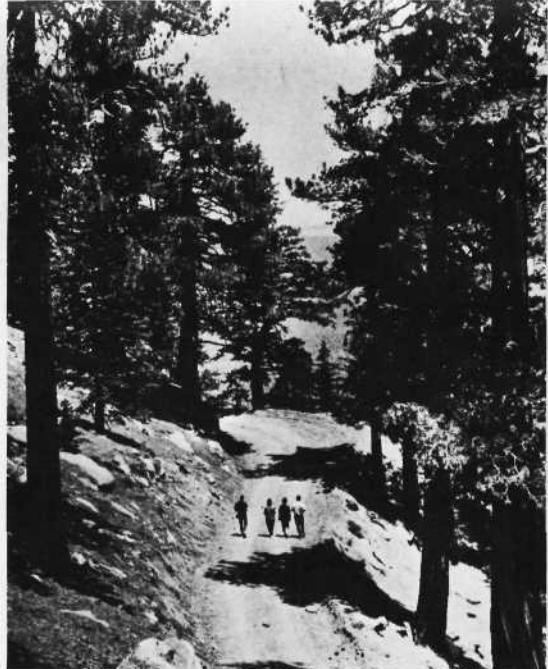
Paul had left his car at the Stump Spring Campground and followed the trail among pine and underbrush to the tip of Toro by crossing along the spine between it and Santa Rosa Peak. We were shivering and wished we'd brought sweaters, but after his long hike, Paul welcomed the cool breeze that rustled the pines.

The log cabin, as sturdily constructed as the tree house, was built by Ragsdale some 30 years ago. It was he, Desert Steve they call him, who painted poems in all the burned out stumps along the road to his hideaway. An outspoken protector of wildlife, his ENJOY BUT DON'T DESTROY signs are posted everywhere. Doors hung agape from his abandoned cabin, but its walls and roof remained tight and the wall-sized stone fireplace spoke of many a cozy evening when wind howled through trees and snow piled on the ground. Outside in the sunlight I sat on a rock upholstered with pine needles and listened to a pair of blue jays squawk from two stunted trees.

Here on top of the Santa Rosas, pine trees appear to grow from the top down, their heavy limbs clutching the earth in a determined effort to prevent their enemy, the wind, from uprooting them.

Surrounded on three sides by desert, but more than 7000 feet above its floor, the air is always dry and cool. Part of the area belongs to the Santa Rosa Indian reservation, but it is unlikely that it will ever be developed further because its few springs do not provide enough water to serve a population. In his article written 26 years ago, Randall Henderson stated that it was possible to reach the summit in an easy hour-and-a-half hike from the end of the road of the Toro ridge. Today this road, maintained by the U. S. Forestry Service, is baracaded with chains a few miles above the Ragsdale cabin cut-off, so it is better for hikers to follow the ridge between the two peaks, along Paul Ricci's trail. It is an ambitious hike, but rewarding—in spite of the Indian taboo.

This taboo has never been put into words, so its curse remains as great a mystery as the location of the famous emerald mine in the Santa Rosas



which, according to legend, produced precious jewels to fill the coffers of central Mexico during ancient times. It was marked by a great rock in the shape of a wolf's head atop a cliff. The late Marshall South wrote that he had found the head of the wolf (DESERT, Dec. '48) but an earthquake had toppled it to the bottom of a gully and he was unable to locate the legendary mine. He did find a small emerald, however.

More recent "legends" tell of gold pockets in the Santa Rosas which produced several rich findings, but were lost when their discoverers were forced to leave the "holes" for various reasons and unable to find them again.

Indian trails are liable to be a clue to the emerald treasure, as trails usually lead to something. After lunch we hiked along some that still criss-cross the mountain. Deer are plentiful here and among the pinon, oak, agave and cacti at decreasing levels early Indians, as well as wildlife, found a prolific source for food. Indian ruins have been found on the slope of the Santa Rosas, but the mountains provided a summer refuge for those desert Indians, rather than a year-round home. Today's visitors should not intrude upon the part of the forest that belongs to the reservation, but there is still plenty of room in the cool Santa Rosas to provide a wondrous retreat for desert dwellers. And, surprisingly, the area is little changed since the Indians first found it.

We hope that Civilization will take no toll on its charm so that those who follow may breathe deeply of its pine-scented air, listen to its chattering blue jays, and relax in its romantic treehouse just as we did on a lazy summer afternoon.





The Serpent Cave of Baja

SAN IGNACIO IS one of the most charming of all Baja villages. This fact offset our disappointment at finding the man who could lead us to the caves, Frank Fischer, away for the day, and learning that the cave we wanted to explore might require a six-day round trip into back country by mule rather than a six-hour circuit—the difference between our having time to make the trip or not.

"Three times you can't trust a Mexican," fumed Uncle Erle, "are when he says 'La salsa no es pica, el caballo es manso, and la distancia no es lejos.'" (The sauce is not hot, the horse is gentle, and the distance is not far).

Actually, Francisco Munoz, Erle Stanley Gardner's trusted pilot, had alerted us to this latter possibility before we departed Conception Bay, but we were too excited over the prospect of seeing the painted cave with the prehistoric map in it to listen. We'd passed most of the day exploring Scammon's Lagoon, but now with a few hours of daylight remaining before our caravan traveling by land would arrive at San Ignacio, we launched upon a tour of the town.

The main point of interest is the mission established by the Jesuits in 1728 and finished by the Dominicans in 1786. It is still in use today and its bellkeeper proudly led us into the belfry for a lofty view of the town. The carved stone and wood angels that fill niches and peer from corners of the vaulted ceiling betray their Indian

B E WITCHED

By Choral Pepper

ancestry. Apparently the early artisans who created them accepted the belief that they were children of the white man's God. Or, perhaps, they visualized the novel conception of heaven as a place populated with angels cast in their own images. *Quien sabe?*

The population of Baja is no longer Indian. Other than a few scattered and small tribes existing in remote valleys, the original inhabitants of Baja were exterminated by disease after the arrival of the Spanish. The peninsula's current population is one that immigrated from Mexico's mainland. There is almost no hereditary connection between the people found in Baja by early missionaries and those living there today.

A river that rises from mountain springs above San Ignacio meanders through the village, but soon fades underground. During its brief run, it fosters date groves, wild palms, and other lush vegetation that separates this verdant patch from an infinity of surrounding desert. Ambling along sleepy lanes, we came upon a



photo by Klaus Sulzmann

BY BAJA

Fourth in a series featuring the adventures of DESERT's Editor and Publisher on a recent expedition to Baja California with author-adventurer Erle Stanley Gardner.

woman feeding a pig. She appeared very proud of this pig and it was the biggest, blackest one I've ever seen. Furthermore, it was the only pig in San Ignacio. When she saw how impressed we were with her pet's magnificence, she moved its pan filled with dates to a better angle so I could get a camera view of its snout rather than its rear.

Swine exist at a minimum in Baja because there is so little to feed them. It is also reported, as related in Fierro Blanco's *Journey of the Flame*, that an old Indian superstition contributed to their unpopularity. When the Padres imported a herd to institute a pig farm, the beasts became so hungry they devoured Indian babies. This may not be true, but the fact remains that there are few swine in Baja.

It was growing dark when we turned a corner and met the Gardner Expedition's two trucks and the Land Rover coming toward us. After an excited reunion we went to a restaurant we'd found—a sort of grass shack

perched on the side of a hill near the fringe of town. Seated at a makeshift table in the center of the room, we were joined from the sidelines by curious, but friendly, Mexicans who sat on benches placed along the walls. Erle ordered beer for the house and everyone had a fiesta, in spite of the cuisine which didn't quite measure up to any we'd previously enjoyed in Baja. But, as mentioned before, San Ignacio is not yet tourist savvy, although it's highly recommended as a place to camp.

One of the local gentlemen present offered us an empty house next to his farm. Its owner's spirit had departed and a black crepe cross was posted above the door to signify the mourning period. A wooden cross was also planted on the hill above the house to assure protection for the family, although the house was unoccupied and sealed up tight. To avoid disturbing any spirits yet in the process of departing, we chose to spread our sleeping bags outside under the veranda's palmleaf roof rather than inside on the casa's dirt floors. Then, with camp established, we called again at the house of Senor Frank Fischer to see what could be learned about the cave.

By this time Mr. Fischer had returned and we saw the photos that had so excited Sam Hicks on his previous trip through San Ignacio. A long, serpentine figure was painted in red and black along the craggy surface of a rock shelter. Above and below it were teddy-bear-men painted half-red and half-black, arms outstretched. Above and below the serpentine figures were occasional



Jean Bethel treats children to candy.

life-sized figures of animals, possibly deer, also striped. To the left of the "head" of the serpent were a tall and a short pair of giant figures painted entirely red, with three similar figures to the left painted totally black, and others of the striped variety below and to the right. Over the heads of the black ones floated a red figure somewhat in the manner of a modern Chagall.

The striped figures are found in a number of Baja caves; it was the serpentine figure that intrigued us. This, to our knowledge, was entirely unique as a motif in Baja's prehistoric art. Although its body was crossed with black lines, giving it a snaky look, its curvature did not follow the orderly rounded curves of most primitive renditions of snakes. Furthermore, it appeared to have large wedge-shaped ears, although its head was indistinct due to erosion. Its tail was forked. Mr. Fischer described other caves in the same region, but no other held the figure of a serpent nor did those formerly explored by Erle. We imagined that this might have been a sort of "temple" for prehistoric people and, perhaps, the strongly contrived serpentine motif held the key to their ancient migration.

The photos Frank Fischer showed us were taken by a physicist from San Diego named Klaus Sulzmann. Two other Americans had also visited the site, we learned from Mr. Fischer. They were Michael Shard of Oregon and Mr. William Stockdale of Putnam, Connecticut. The fact that others had already investigated the site may have dampened our enthusiasm a bit, but not enough

A lady and pet pig beside a lazy San Ignacio street.



to have kept us from making the trip if it had been possible within our limited time. However, Frank Fischer was adamant. Six days would be minimum—three there and three back, without allowing so much as a day to poke around.

Frank Fischer reported that those who had seen the cave all agreed that the serpent represented the canyon in which the cave shelter was located. This, at least, we could ascertain one way or the other by comparing a sketch of the serpent with a topographical sketch of the canyon as seen from the air.

Early the next morning, after being awakened by the crowing of cocks and the visitations of children curious to see what those crazy gringos were doing sleeping in a farmyard, we picked up Frank Fischer at his home and all drove to the airstrip. One member of our party made a copy of the shape of the serpent from Fischer's photograph while Sam, Munoz and Fischer flew over the canyon to sketch it and take pictures. When they landed, we compared the two. Entirely different. If the figure painted in the cave represented a map, we're convinced that it wasn't a map of that particular canyon.

Since we hadn't time to explore further, our party again split forces and headed back to Mulege. Jack and I, anxious to arrive early and spend the day on horseback there, flew with Erle. I welcomed the flight for the "thinking" time it provided as I had a lot of loose-end thoughts about cave paintings bouncing through my head.



We slept under a farmyard veranda.

Although the subject has never been fully explored, these paintings are not newly discovered. One of the first articles to be published about them appeared in DESERT Magazine 15 years ago (Feb. 1949). This article described a cave found by Edward H. Davis, a collector for the Heye Museum of the American Indian in New York. On an expedition to Baja in 1928, Davis learned of a legend that hinted of a vast painting hidden in a cave. His guide had never seen it, but by following landmarks established in the legend, he and Davis packed into the San Baltazar mountains west of Mulege and found it. Further research on the part of Mr. Davis revealed no more about its artists than is known today.

However, there had been material published in France that Mr. Davis missed. This was brought to our attention by Campbell Grant, whose exhaustive studies of California's painted caves near Santa Barbara appeared in this year's May issue of DESERT. Mr. Grant loaned

us a Zerox copy he had obtained of a report written by the French archeologist, Leon Diguet, who explored and made his report about *La Pictographie de las Basse-Californie* around 1873. This is the most extensive professional report on Baja caves that has so far been published—and it is written in French.

Loosely translated, Diguet reported that the figures of Baja's cave paintings display an art highly developed, with motifs suggestive of a spiritual idea or belief. The caves he illustrated and explored were all between the 27th and 28th parallels. Elsewhere petroglyphs were found, but no pictographs. He described the figures as distinctive, life-sized or more, with arms elevated at right angles above the head and bodies divided vertically and painted red and black. He mentioned one cave with a figure painted entirely white. Some figures are prone, he wrote, and many are pierced with arrows. On their heads the figures wore masks or heads of animals bearing horns, and sometimes deer and puma (mountain lion) mingled with the figures of people, often painted one over the other. Diguet was familiar with the pictographs of New Mexico, Arizona and Upper California, but denied any association of those with these.

The Baja caves he identified were more in the order of cave shelters than caves. Diguet noted that most were located near extinct water sources and the cave shelters were formed in washes where storms had excavated the faces of cliffs. Because they were too high for any man to reach, he believed the murals were executed from platforms constructed of boulders, later removed.

This brings us up to the present and the most recent expedition to explore Baja's caves—that of Erle Stanley Gardner's in 1961. Accompanying the Gardner party was Dr. Clement Meighan, an archeologist from U.C.L.A. Incorporating the use of helicopters, Gardner was able to explore areas heretofore unvisited by modern man. The caves he discovered were decorated by the same school of artists as those found by Diguet and Davis, but were not the same caves. Gardner and Meighan believe there are still many caves yet to be discovered. The new one with the serpent seems to bear this out.

As for artifacts, they are almost non-existent at the sites of the caves. This might indicate that the caves were used for ceremonial purposes only and camping done elsewhere. Dr. Meighan dug up one object with a Carbon-14 dating of about 600 years ago, but it might have belonged to Indians who occupied the cave shelter at a later date. At DESERT's request, Dr. Meighan has promised a forthcoming article with more information on this subject.

Diguet reported that the artifacts he found (over 90 years ago) could be identified as belonging to the Co-chimis, Guaycuras and Pericues who later sought refuge from the cold in these caves. However, he was able to obtain a small collection of relics found in a mission after the padres had departed which was labeled as having originated in the painted caves of Loreto. These consisted of an axe of polished flint, similar to ones found in Upper California, two balls perforated at their centers, a rowel carved from rock, and a serpentine figure. These artifacts were presented to the *Musee Ethnographic du Trocadero*.

The one that intrigued me was the serpentine figure. I wanted to determine whether his reference was to a mineral rock of that name, or to the shape of the figure and, if the latter, whether or not the serpentine figure had wedge-shaped ears like the serpent figure in the painted cave. I have walked through the Trocadero Gardens in Paris on a number of occasions and I knew that



Gardner, Fischer, Sine, Hicks and Costello plan flight over serpent cave, as seen below. Below: The Peppers and Erle Stanley Gardner bid Frank Fischer farewell.



there was no Museum of Ethnology located there today. However, there is the wonderful Museum of Man in the adjacent Palace of Chaillot and it occurred to me that artifacts may have been transferred to it from the old Trocadero when the new *Palais de Chaillot* was constructed in 1937. Through our American Embassy, I was put in touch with its director, Henri Lehmann. Considering my relaxed hold upon the French language, we've had a successful correspondence and Monsieur Lehmann assures us that the word "serpentine" referred to a "silicate de magnésium et de fer," rather than the figure of a snake. He did, however, enclose a rough sketch of an engraving on one of the articles which he referred to as a "stylized serpent motif." It is too styl-

(Continued on Page 32)



AMERICA'S CAMELEERS

by Jack Bryson

THE YEAR WAS 1853. Secretary of War Jefferson Davis stood before an unimpressed Congress. "For military purposes," he pleaded, "for expresses and for reconnaissances it is believed the dromedary would supply a want now seriously felt in our service."

The august body refused to grant the funds. However, journalists picked up the cry. "Camels for America" became their slogan. All America rose to the demand. Soon Congress was pressured into reversing its decision. In 1855 the sum of \$30,000 was appropriated to finance a procurement expedition to the Levantine countries bordering on the eastern Mediterranean Sea.

Lieutenant David Dixon Porter, a 42-year-old naval veteran who at age 12 had sailed in a campaign against West Indian pirates, was placed in command of the Navy storeship Supply with orders to bring back camels.

The Supply, a wooden vessel only 29-feet wide and less than half the length of a football field, served as a supply ship in Commodore Perry's expedition to Japan in 1853. This three-master was well equipped to carry its 40 officers and men plus expeditionary supplies, but not a herd of camels besides. Lieutenant Porter had his first of many problems.

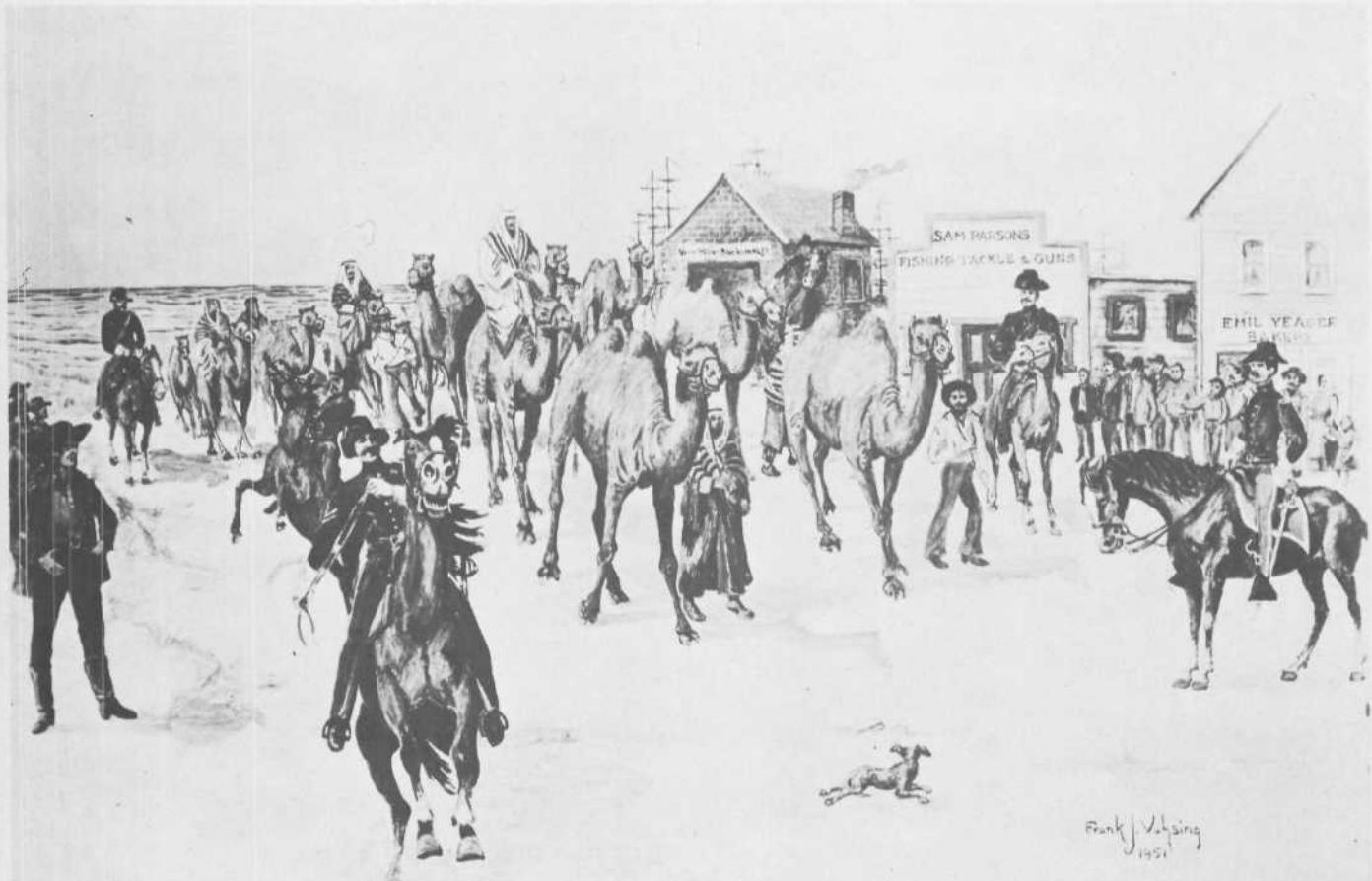
Major Henry Constantine Wayne, son of a Supreme Court Associate Justice, was placed in charge of the business end of the operation. Wayne was an impressive man both in appearance and manner. As was the custom of the day, he wore a small triangular patch of beard just beneath his lower lip and above the crease of his chin. The handsome, 41-year-old West Pointer arrived within a week.

Boarding the Supply, he stared incredulously at the strangest structure ever to grace the deck of an American naval vessel. "Porter's camel house"

it was called—a superstructure 60-feet long 12-feet wide and tall enough to accommodate the tallest camel (they thought). There were 20 port-holes on each side and centered on the top was an opening about the size of a ping-pong table. The ship's boom was rigged to hoist, swing and then place a "camel cage" in the opening—like the center brick of a cobblestone walk—to transfer camels from a dock to their "house".

On June 3, 1856, the Supply set sail for the Levant with Tunis, North Africa first port of call. There they were joined by Gwynne Harris Heap, a brother-in-law of Porter. Among Heap's credits were a knowledge of the Far East and the camel, plus artistic ability which proved invaluable in illustrating this unusual venture for history.

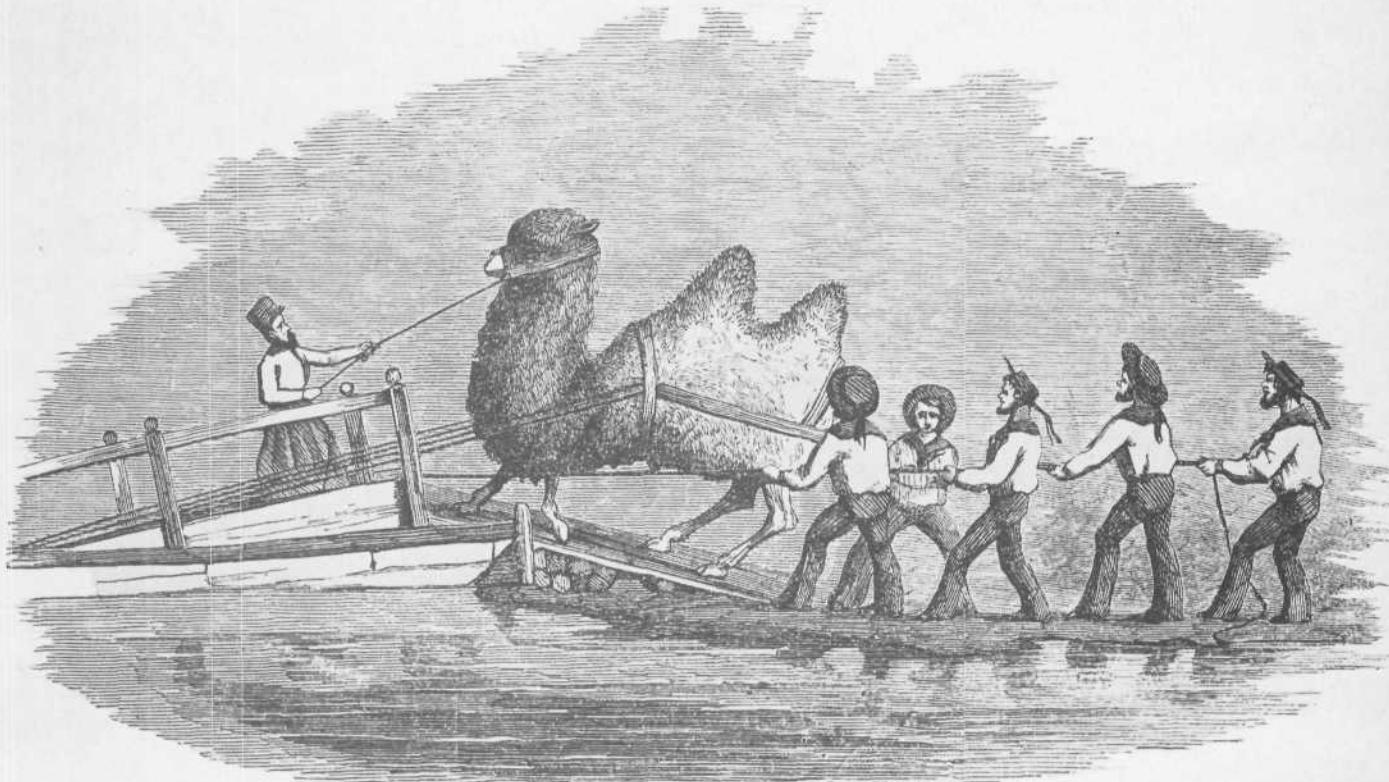
Tied up near a dockside marketplace they saw their first camel. This huge, ugly puzzle of a beast must have intimidated the three men.



Landing of camels at Indianola, Texas in 1856.

Painting by Frank Vohsing.

*a wonderfully funny - sometimes tragic - account
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The embarkation of America's camels in Egypt in 1856.

Through new and humble eyes they began to see the enormity of their task. The unkempt dromedary, with its single hump, surveyed them. Its jaw, moving with a characteristic hammock-like swing, heightened its air of defiance. Then, turning its head, its split-lip probed for the most tender portions of a basket on display in the market—a basket soon destined to become nothing more than an inscrutable camel smile.

Undaunted, the men turned to their task.

News of their quest had preceded them. The ruling Bey of Tunis presented them with a pair of "prize" camels, which later turned out to be so ridden with disease they dispensed them at Smyrna, Turkey.

There they met Hadji Ali, a likeable camel driver whose amiable disposition soon caused the Americans to contract his name to "Hi Jolly". This swarthy little Arab with the sharp, dark eyes proved so helpful in teaching them about camels they made him one of seven other natives to return with them to America.

Through Hi Jolly they learned the camel's hump was an indication of its state of well-being. A healthy camel has a firm, tall hump—the storehouse of nourishment from which it sustains itself. Conversely, a hump which sags like a stocking cap indicates a run-down camel—one either overtaxed or sick.

Aided by Hi Jolly's coaching and their native Yankee ingenuity, they gained experience as they toured the Mediterranean lands. Like used car buyers peering for body blemishes, they learned to scrutinize camels for brand marks, having learned that the universal treatment for camel ailments was cautery. Thus, a camel tattooed with many brand marks indicated a camel ailing an equal number of time.

While in Turkey they encountered difficulty in obtaining camels because the Crimean War was claiming all available animals so they moved on to Greece. There it occurred to them to sail northwest to Constantinople and on across the Black Sea to Balaklava, where the famous Light Bri-

gade had charged only two years before. There they could learn firsthand the value of camels in military service.

Encouraged by glowing reports in the Crimea, they pressed on with their camel-search to Egypt and finally back to Smyrna, from where they sailed for America on February 15, 1856 with a cargo of 34 camels—including saddles. Cost: \$8,000.

The only unforeseen item was a mammoth gray camel, a favorite of Hi Jolly's which was 10-feet long, 7½-feet tall with a "waist measurement" of 9-feet 9-inches. They had to cut a hole in the roof of the camel house!

According to Porter's log the return trip was the roughest he had experienced in over 25 years at sea. The camels owed their survival to Porter's ingenuity. Knowing camels grow leathery pads over their knees and can comfortably kneel for long periods, he strapped their legs to the deck just behind the knees. To counteract the rolling of the vessel, burlap stuffed with straw was packed



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between the animals, like giant pillows. Thus, Uncle Sam's camels rode the bounding main.

To complicate their problem at sea, many of the females gave birth to young. Unhappily, none of these survived to maturity, and one bactrian (two humps) died in camel-birth, giving rise to the bizarre scene of a camel burial at sea.

After three long months, the Supply arrived in Texas. Arrangements were

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made to land the camels at Indianola, the same point where LaSalle landed on January 17, 1685. Today it is a stretch of sandy beach with only an occasional unearthed rusty horseshoe to show it was once a thriving frontier town.

Once on solid ground, the contrary camels went berserk—running, jumping, kicking. Four were pehlevans (wrestling camels) who promptly entered into a life and death struggle in front of the livery stable. Others broke away on the main street of town, bullying the citizenry by spitting on those less agile. A few of the more emotional camels exercised their most obnoxious trait—that of blowing their huge bloody bladders from their mouths. It was an exciting time in Indianola, until Major Wayne regained control.

Here Wayne and Porter split forces as the latter was detached to the Levant, probably resignedly, for another load of camels.



"Should you take off your hat, dear?"

Major Wayne was a man of great affection and kindness. It was he who gave the children rides when the camels were going through town. A 10-year-old girl, writing in her diary, told how he let her ride a camel to the outskirts of town on the day the camels left for their new quarters at Camp Verde, and how he cautioned her not to get camel saliva on her skin for it would make awful sores. To conclude, she wrote, "I love Major Wayne."

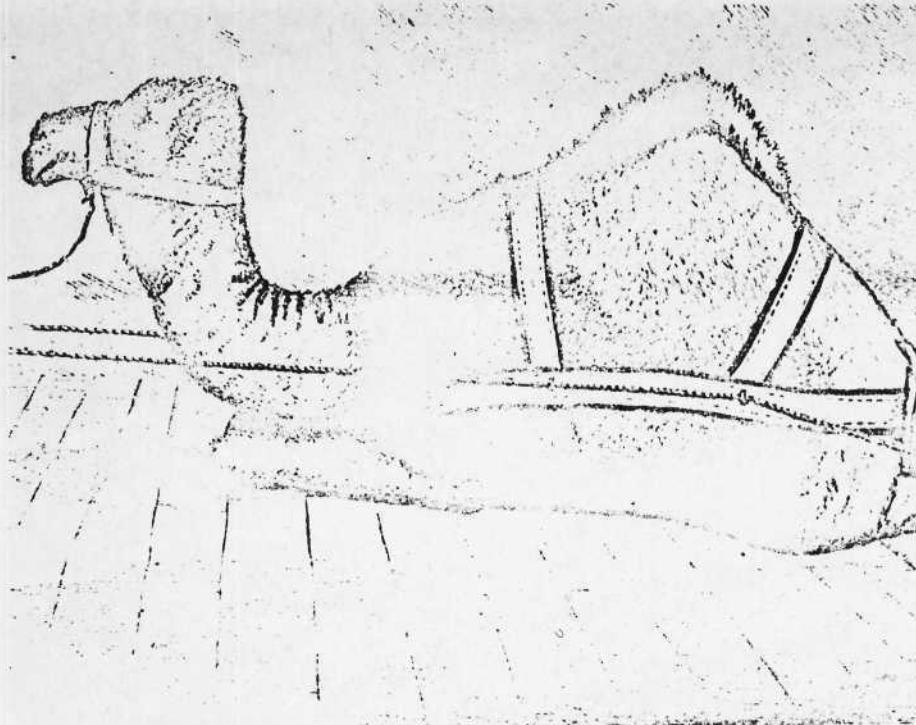
At Camp Verde, 60-miles northwest of San Antonio, Wayne reproduced a gigantic khan (camel pen) from detailed sketches he had made in the Far East. Such dedication was characteristic of Wayne. He always did a little more than was absolutely necessary.

Yet Wayne was a man of fun, too. On an excursion to San Antonio where townsmen jeered the camels, he led the big gray, now named Seid, to a conspicuous position by the quartermaster's forage house. There he made the camel kneel and then asked the supply sergeant to sling a 300-pound bale of hay on each side. Already bearing a load that would crumple the average mule, the camel was loaded with another bale and then another. The crowd watched in suspense until Seid, crabbing vociferously in his typical whistling groan arose with 1256 pounds of hay and followed the grinning Major Wayne, who nonchalantly led him away.

From Camp Verde, Wayne wrote Jefferson Davis a proposed plan for a breeding farm and program of five years propagation so that the camel would be thoroughly acclimated and in sufficient numbers to provide a proper nucleus for a camel corps. His suggestion was disregarded.

To make matters worse, the personal pique of the regimental officers at Camp Verde directed at staff officer Wayne made working conditions increasingly difficult. Anxious that the cause not fail, Wayne requested reassignment. In March, 1857, he was detached from the camel project and reassigned to other duties. It took an objective outsider to recognize his great achievement. The country of France awarded him the gold medal of the *Société Impériale Zoologique d'Acclimation de Paris* for introducing camels to the United States.

Relieving Major Wayne, a former Superintendent of Indian Affairs in California, Lieutenant Edward Fitzgerald Beale, was ordered to Camp Verde to take charge of the camels. His first assignment was to survey a wagon road from Fort Defiance, on



Camel Secured for Gale.

Sketch by G. H. Heap

the Arizona-New Mexico boundary to Fort Tejon, California, where the animals were to be quartered.

The need for animal feed on this trek fell far below expectations because of the camels' surprising ability to live off the land. They thrived on mesquite beans, cactus leaves and prickly pears. After the expedition passed El Paso, a crusty old resident drawled, ". . . and they seemed to have a hankerin' for well ropes and wheelbarrow handles, too!" Some claimed that camels grew fat where jackasses starved to death.

To the north was the dreaded Jornada del Muerto, 90 miles of parched land without water. Without camels, this would have been a major logistic problem for the large party of men and animals. Ironically, the camels supplied water for the thirsty, braying mules.

The persevering camels carried the party north for four days with no water for themselves, their special stomachs honey-combed with cells providing their daily need. Arriving at the Rio Grande on the fourth day, the mules bolted into the water, while the camels waited, contentedly munching their cud.

"In this country," Beale wrote, "there are only two questions—water and Indians." The latter Beale encountered on a side trip he made west of Albuquerque while riding Seid. Once saddled, Lieutenant Beale gave the big, spirited dromedary his head and they bounded into the desert, camel and rider swaying as one. In

two hours they covered nearly 20 miles. It was then Beale saw a band of Apaches in the surrounding hills.

History does not record the thoughts that crossed the minds of these warriors, but the sight of Beale atop the monstrous Seid must have made them stop and wonder if perhaps this was an emissary from the happy hunting ground. A lone horseman would not have survived, but faced with the galloping Seid and intrepid Beale, the Apaches decided not to challenge.

In a report to the Secretary of War written at the Colorado River, Beale told how he had never spared the camels, ". . . and subjected them to so many lateral explorations that by the end of the trip they had traveled nearly twice the distance of the mules carrying heavy packs . . . driving the overburdened camels through volcanic rock beds, up and down precipitous passes the mules could not manage even when unladen and permitted to pick their way. There is not a man among us," he concluded, "who would not prefer the most indifferent camel to four of our best mules."

Following the final assignment of Lt. Beale, Hi Jolly and Seid roamed the Southwest with wagon trains and explorations for three years. Then such assignments became infrequent. By the start of the Civil War there were 66 camels still at Camp Verde, Texas and 40 or more at Fort Tejon, mostly inactive.

One yarn tells of friendly Hi Jolly in a large yellow cart drawn by

Seid, making an uninvited visit to a German picnic in Los Angeles. The holiday crowd deserted in panic, leaving a wake of broken bottles, strewn baskets and trampled weinerwurst. Nuisances such as this caused the Army to auction off the camels after the Civil War. Their new owners attempted freight lines, circuses and even camel races, but none were successful and by 1870, most of the camels were turned loose to become a menace to crops and livestock. Nevada passed an act prohibiting them within its boundaries, and elsewhere they were shot on sight and eaten by Indians—betrayed by a fickle public who had once clamored for them.

As a little known chapter of our Manifest Destiny; the great camel experiment will always be remembered; but why did it fail? Three reasons are attributed. The loss of leadership of men like Porter, Wayne and Beale hurt the cause, for it should be remembered the camels did well while these men were in charge. Next, the Civil War claimed the entire attention of official Washington and incidental projects, like the Camel Corps, were overlooked. Finally, after the Civil War came the expansive building of the American railroads which eliminated a need for the "ship of the desert."

The camel drivers, too, were abandoned by the government they had served so faithfully—even Hi Jolly. As an Indian scout and prospector, he roamed the Southwest until his death at Quartzite, Arizona at age 75. Almost like a 20th Century apology, the Arizona Highway Commission has now erected a large stone pyramid north of U. S. Highway 60-70 where Hi Jolly is buried. The plaque reads, *The last camp of Hi Jolly . . . over 30 years a faithful aid to the U.S. Government.*

Of Hi Jolly's death, a prospector tells a tale he swears is true. The prospector claims he walked into a Quartzite barroom and mentioned a huge gray camel he had just seen out in the desert. One of the customers, a swarthy man with darting eyes, excitedly asked where the camel was and immediately he left. Two days later Hi Jolly and the big gray camel were found dead, Hi Jolly's arms still around the camel's neck.

But of this, we can be sure. In the twilight zone of the untrod West, Hi Jolly and Seid surely must roam. Occasionally, even today, Arizona police receive reports that a camel with a skeleton astride is galloping across the sand. And if some say they have seen them, who can say they did not? Who can say?

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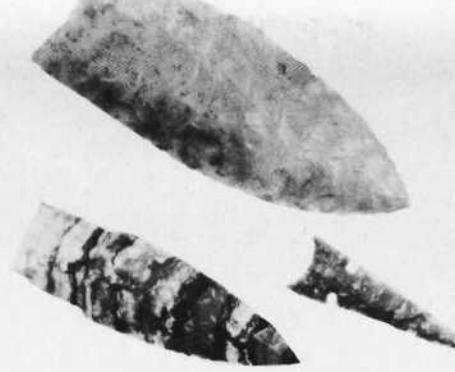
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SOMETIME BETWEEN 12 and 15 thousand years ago, a band of hunters—perhaps on the trail of a giant mammoth—happened across a series of rocky bluffs overlooking what is now the Canadian River in the Texas Panhandle. The outcroppings of stone on the hillsides immediately attracted the hunters' attention. It was a flint, yet quite different from the flint which they used to fashion the spear points they were carrying.

Taking samples of the rainbow-colored stone back to their camp, the mammoth pursuers found the new flint to be workable and, when chipped into a weapon, far more durable than the stone they had been using.

Such was the beginning of the oldest, most continuous mining operation on the North American continent—the Alibates Flint Quarries, located about 35 miles north east of Amarillo, Texas.

The quarries were first recognized as a large mining operation by Floyd V. Studer in 1925. Studer, a nationally known archaeologist from Amarillo, had been working in the area since 1907, when as a 15-year-old schoolboy he had stumbled on some Panhandle Indian ruins which he named "The Buried City."

As nearly as experts are able to reconstruct the facts, the first to utilize the Alibates flint was Clovis Man, who lived 10,000 years before the birth of Christ. Yet, so suitable was the Alibates flint that the Indians were still using it when Coronado marched across the Texas Panhandle in 1541.

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ALIBATES-

Unlike most flint, which is found in nodules, the Alibates is an actual vein of high-quality stone that runs about a mile long and from 50 to 400 feet wide. Technically, the flint is agatized dolomite occurring in reds, blues, whites, purples, yellows, tans, grays and blacks. Much of it is banded, striped, splotched, streaked or dotted. The outcroppings of the beautiful flint give the Canadian River hillsides the illusion of jeweled fingers of a giant hand. To those who used the flint, the red stone was preferred for its striking color and superior durability. Although tons of flint lay exposed to the surface, prehistoric man and early Indians quarried the flint to obtain the quality stone—hence the centuries-long mining operation.

Down through the centuries Clovis Man and the various Ice Age and Stone Age cultures came and went along the valley of the Canadian River. Primitive peoples made trips into the Texas Panhandle to hunt the plentiful bison and to take the Alibates flint in "blanks," or ready-to-use work pieces, back with them to areas of New Mexico, Oklahoma, Colorado, Wyoming and southern Kansas.

Paleo-man and the early Indian mined the Alibates flint by the use of a percussion tool, the hammer-stone. About the size of a human head, these durable stones—composed of a highly resistant material quite different in texture from the flint—were thrown by hand or lifted to a tall beam and dropped into the quarry. When the chunks of flint were pried loose, smaller hand-size

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the Prehistoric Treasure

BY SAM ED SPENCE

hammerstones were used to fashion the flint into the blanks for easier transport. The blanks were later flaked into fine points and tools by utilizing dry bones and antler tips as chipping devices.

The Alibates quarries passed through the hands of many prehistoric cultures and then, about 900 A.D., an Indian tribe of Puebloan origin moved into the Texas Panhandle. The abundance of the fine quality flint was surely the controlling factor in the growth of these unusual people—unusual because their dwellings represented a unique features in plains archaeology.

Designated the Texas Panhandle Pueblo Culture, these Indians developed limestone-slab apartment houses with air-conditioning and insulation. These ruins have been referred to as the highest development of ancient civilization confined solely to the state of Texas.

It was a portion of this Indian civilization that young Floyd Studer discovered as "The Buried City." In the 1930's a WPA crew excavated a 60-room ruin of the Pueblo culture (a 100-room ruin is being worked on at present), that yielded 16,000 identifiable artifacts, 11,000 of them not native to this region. It was evident that the Indians had exploited their valuable flint treasure to the hilt; they had traded the stone far and wide for materials not available in their own locale.

The Indian's apartment houses—masonry-type pueblos—were marvels of construction. Walls were built of

double rows of vertically placed stones, the inner-space filled with rubble and adobe; atop these were placed horizontal layers of rock with adobe binding the insulation feature.

Evidence of air-conditioning was crude, but quite effective. A ventilation corridor about 12 feet long extended into the main room of each apartment. At the opening of each tunnel was a rock slab which served as a deflector, operating on the same principle as a chimney flue.

Besides their activities in the flint quarries, these early Indians developed agriculture and grew corn. Then somewhere between 1200 and 1400 A.D., they disappeared. What would cause these ingenious people to vacate their precious flint quarries, farms and homes can only be speculation. The most likely theory is that a prolonged drought spoiled the corn crops and they migrated west, where they built the still more remarkable pueblos which Coronado found in New Mexico and Arizona. But, with these people went the secret of the Alibates enterprise. Later tribes used the flint, but never again were the fruitful quarries mined. Thus was broken the chain of one of man's longest operations—a mining business that had been a going concern for over 11,000 years.

Plans are now under way for putting the Alibates Flint Quarries back into operation, this time in the form of a National Monument. It is hoped that Congress will pass a bill to preserve this landmark for the study and enjoyment of future generations. ///

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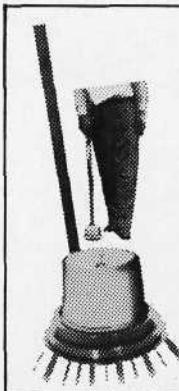
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BEWITCHED BY BAJA

(Continued from Page 25)

ized to shed any light upon our snake in the cave, however, and from Diguet's description of the various caves he explored, the Painted Cave of Loreto appears to be of a different vintage and culture than those of the striped figures.

Who painted these caves with the striped men and animals? According to the earliest missionaries, they were executed by a culture far more advanced than the population present when missionaries arrived. The Indians of that time told the Spaniards that the paintings were made by a nation of giants who came from the North. The belief in a race of giants was common among all native Mexicans, according to Diguet, and those native to Lower California probably reached this conclusion because of the immense size of the persons depicted in the cave murals, in addition to the heights at which they were executed. There is other evidence of this belief. In his *Journey of the Flame*, Blanco wrote of a 10-foot skeleton dug up by a priest; and the name *California*, given to the peninsula by early Spaniards who believed it to be an island, was derived from a popular novel about an Amazon Queen bearing that name.

One point I should like to make is that these cave paintings in no way compare to the Conception Bay petroglyphs noted in a preceding article of this series. Those were varied and interesting, but did not suggest any particular spiritual development. Where you'd expect to find fish, the subjects pecked, or engraved, into the rocks were of fish. A few figures with elevated arms mingled with the assortment of wild life and abstractions, but it is my feeling these were the weak attempts of a medicine man, whose power was threatened by incoming

missionaries, to imitate an earlier magic that still mystified the natives. Ricardo Castillo of Tijuana has since sent us a superb collection of Baja petroglyph photographs which again seem more advanced than those at Conception Bay, but are not related to the cave paintings.

The more familiar we became with the subject of Baja cave paintings, the more convinced we were that the cave with the serpent indicated something special. One of our first acts upon returning home was to contact the Klaus Sulzmann's in San Diego, whose photos were shown to us by Frank Fischer. Sharing our enthusiasm, they invited us over to see their movies. This proved almost as enlightening as personally making the trip, as Klaus Sulzmann is an expert cameraman and has prepared a thoroughly professional travelogue with a sound track. He also possesses a fine collection of photos of the snake cave, as well as others in the region, some of which we have reproduced here.

Traveling in two 4-wheel-drive vehicles and accompanied by Dr. Alex Thomson and Larry Acton, also physicists, Sulzmann and his companions visited the painted caves quite by accident. One of their vehicles developed an ailment as they approached San Ignacio and, since Frank Fischer is a blacksmith, they were referred to him. With their original German homeland in common, Fischer and Sulzmann developed a passing friendship which led to Fischer's offer to arrange for mules and a guide to the caves while awaiting a necessary part to repair the vehicle.

Sulzmann recommends the trip only for people who can stand hours and hours of discomfort, as the saddles are miserable and not designed for adjustments. With two mules and three donkeys, they camped in washed out caves and rocky dry beds, relying completely upon their guide, Jose Maria Espinoza, who took care of details such as finding firewood where nothing appeared to grow, locating water holes with drinkable water and stimulating the disinterested beasts, as Sulzmann expressed it.

All together, they explored four caves with paintings, but their guide told them there were many more further up into the mountains. Only one cave contained the serpent motif and, from what the Sulzmann party could gather from their guide (he didn't speak English, nor they Spanish), none of the others duplicated it. The three additional ones visited were in various states of preservation, but the one with the serpent was the best.

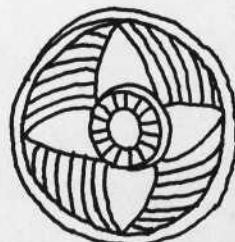
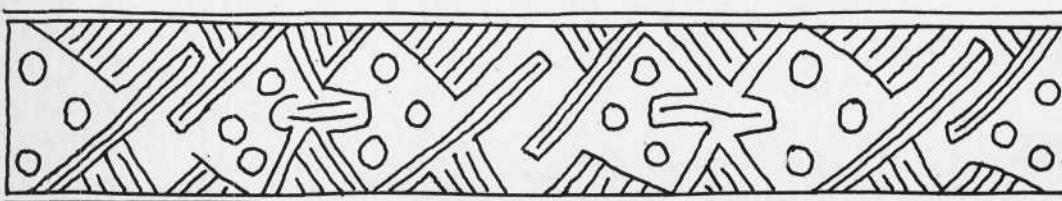
There are present indications that serious archeological work might be undertaken in Baja in the near future. If so, it will be interesting to follow particularly any results emerging from the snaky cave.

And so ends my part of an experience which could never be duplicated, but I hope will be deepened with future excursions into Baja. One of the advantages of our splitting forces on this trip is that now Jack can relate an entirely different set of adventures from those I shared with Erle Stanley Gardner. ///

Continued next month . . .



Copy of engraved artifacts from Painted Cave of Loreto now in the Museum of Man in Paris. These articles were probably used as talismans by Indian medicine men of a later era than those who produced the above cave paintings.



SCORPIONS

by John Goodman

WHATEVER THE occasion, your first encounter with a scorpion is usually a sobering experience. The hiker and camper in the Southwest is a potential victim, if the wrong kind of scorpion crawls across his bedroll or climbs into his gear. Scorpion stings lead the list as a cause of death from lethal stings or bites from animals in the state of Arizona and in Mexico. Other Southwest states and Baja California are apparently spared the venomous *Centruroides*, although they have plenty of the harmless scorpions which, like the *Hadrurus*, could almost frighten you to death on sight.

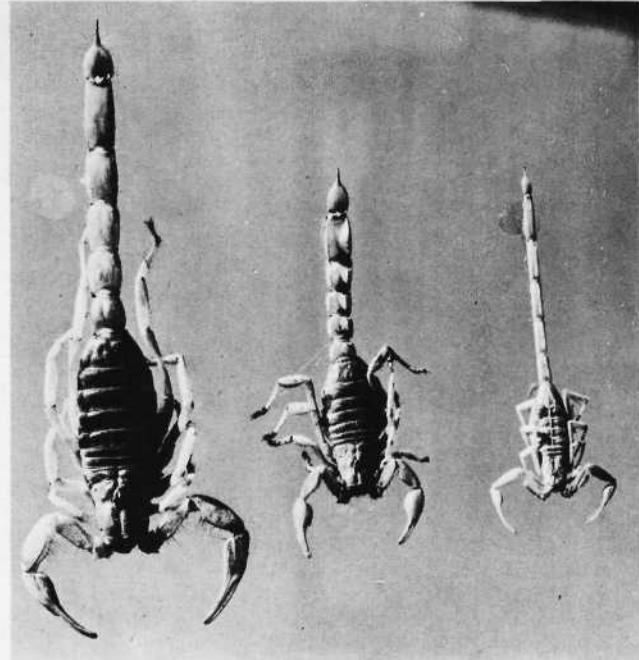
The one consolation is that your chances for being stung by a venomous scorpion are remote, even in areas where they abound. During the past 15 years, we've camped often where they occur and even, on occasion, found one pressed under our sleeping bag between the tarp and the ground. We have never been stung.

Yet, it is often the chance encounter that proves dangerous. A person we know reached into a Kleenex box and received a sting on her finger. She felt a numbness and tingling sensation for months afterward in the affected hand. This was in addition, of course, to the immediate symptoms, which will be mentioned. Another friend received a sting on the finger when he picked up a board in his yard. Immediately feeling faint, he went into the house and drank a cup of coffee. Whether this did him any good isn't known, but he recovered sufficiently in a few hours to get back to work. However, he too felt pain and

tenderness at the puncture site for many weeks.

These two instances are in sharp contrast to what may happen if a small child is stung. Although most stings are received by older children and adults, who generally recover, a child under five who is stung is in serious condition. Immediate symptoms, though varied, include increased salivation, tightness of throat and tongue muscles, restless behavior to extreme agitation, sometimes convulsions—all reactions produced by the toxic action of the venom on the central nervous system. What is needed is an antitoxin to neutralize the venom. This is available but is seldom on hand when needed.

Dr. H. L. Stahnke of Arizona State University, has strongly recommended the use of a technique now widely publicized and probably familiar to most readers of DESERT. This includes tying off, then immersion of the area of the sting in ice water, or surrounding it with ice packs as soon as possible and keeping it cold until a physician may be reached. This retards the absorption of the venom from the immediate area into the general circulation. Care must be exercised not to freeze or frost-bite the local area immersed in the ice water or other trouble will result. Just where one gets ice when camped for weeks in the desert has never been fully explained to me. In the past I used to carry small ethyl chloride atomizers in the car and in the field, but on the few occasions when they were needed, they proved useless. Either the fluid had leaked out or the pressure had gone so that they



Left to right: *Hadrurus hirsutus*, not deadly; *Vejovis spinigeris*, not deadly; *Centruroides sculpturatus*, deadly.

would not spray properly. Fortunately, on none of these occasions was the situation serious enough to cause concern.

Identity of the highly dangerous *Centruroides* is fairly easy, even for the non-specialist. *Centruroides* is the only deadly scorpion encountered in the Southwest and Mexico, so only its peculiar features need be remembered. It is small compared to the others. It is light tan or yellow in color, often called the straw-colored scorpion. Characteristic is its tail, which is long and slender and almost round in cross-section. Its claws are long, slender and delicately curved, with a rather small bulbous portion and there is a barely perceptible notch at the base of the curved spine at the tail tip. This latter feature may be shared by other non-venomous scorpions, but is not present in the other two commonly encountered on the desert—*Vejovis* and *Hadrurus*, both larger and with bulkier tails and thicker, shorter claws. *Hadrurus* is light in color like *Centruroides*, but, except for its young, is many times the size of the venomous *Centruroides* and has a liberal sprinkling of visible hairs here and there over the body. *Vejovis* can be identified at a glance because it is of a darker shade of tan, or reddish-brown. It occurs in damper areas and higher in the mountains. *Vejovis* and *Hadrurus* are harmless. Their stings approximate that of a bee sting, causing only a transitory local pain and irritation, unless allergies exist.

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A Profile of Time

A 4600-year-old monarch



by Leon Callaway

A strange story
of the strange tree
on this month's cover.

LIFE AND TIME are capricious companions, and in no greater way is this exemplified than in the chaotic shapes and tenacious natural history of the ageless Bristlecone Pine. The dwelling place of this life-form that time forgot is amongst the steep, desolate canyons piercing the summits of the White Mountains of California. *Pinus aristata*, as the scientist calls it, is the oldest living thing on earth.

The initial discovery of these trees and their tremendous age was made by the late Dr. Edmund Schulman,

dendrochronologist for the University of Arizona, in 1953. Their discovery was made more by chance than by design when Dr. Schulman took a side trip into the White Mountains to check out a report about another species of pine.

The oldest Bristlecones are found on the steep slopes of canyons in desolate regions of the White Mountains at an average elevation of 10,000 feet. The tallest, stoutest, and healthiest trees are not the oldest, but rather, the short, grotesquely twisted derelicts growing on the high arid slopes attain the greatest age. Seventeen of them are at least 4,000 years old, and one has passed the 4,600-year mark. These trees were saplings when the Babylonian Empire was at its zenith, and already ancient when Odysseus and his Homeric host besieged the citadel of Troy in 1200 B.C.

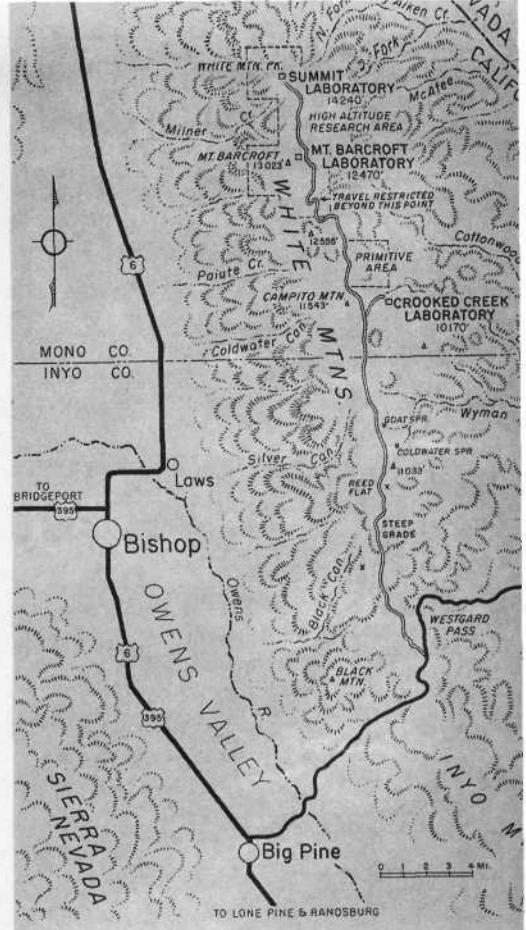
Most of the "Ancients" are now in a state of prolonged mortification. Their life is sustained by a narrow strip of live bark, a life-line, as it were, that is slowly but steadily decreasing in size. In a few 100 years, these trees will be nothing more than twisted and dried remnants that endured more than four milleniums of great droughts, devastating fires, landslides, and earthquakes. The dead-

wood, which composes the largest part of the trees, has been sandblasted to a beautiful whitish color by sand and gravel during the violent windstorms common to the area.

The extraordinary longevity of these trees is attributed to their ability to stop growing during protracted periods of drought. During the frequent droughts that plague this area, young branches wither and die first, then the older ones. If the dry spell persists 25 years or more the main trunks may wither and die until only one lone branch remains with enough greenery to sustain photosynthesis and life. Its slow rate of growth is illustrated in the exhibit case at Schulman Grove. Whereas most trees exhibit neat series of growth rings, the Bristlecone shows none to the naked eye.

When rains finally do come, these patient patriarchs begin to grow again, adding minute new rings and new growth. It is as if these long-suffering things experience a biological Renaissance, for with the new growth come life-producing cones and pollen pods. Thus, through the cycles of suspended animation and growth these trees fulfill their primary function here on earth—the propagation of their species. Surprisingly, seed from the cones of the oldest

Campground near site of Bristlecones.



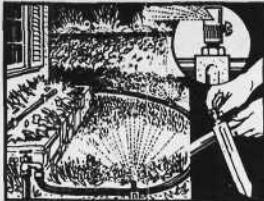
Bristlecones germinate and grow just the same as seed from young, vigorous trees. If only science could isolate the cause!

The route to the Bristlecone Pine Forest, situated within the confines of the Inyo National Forest, begins with a turn east onto Westgard Road off of U. S. 395 at the north end of Big Pine, California. Westgard Road is narrow and winding, but still a good asphalt-topped thoroughfare. It climbs steeply through a narrow canyon for about two miles, then levels off at the canyon's upper reaches. From here it passes through picturesque Pinon Pine country. Approximately 10 miles from Big Pine there is a large National Parks Service sign directing the park visitor to turn left onto a dirt road. This can be traversed in a standard passenger automobile, but until it has been fully improved, I do not recommend pulling a trailer unless it is attached to a rather stout-hearted pick-up.

A camera is recommended. Panoramas east to Nevada, west to the Owen's Valley below and the majestic Sierra Nevadas towering above the valley are breathtaking.

The automobile trip ends at Schulman Grove, then the tour begins afoot and follows Methuselah Walk. Wandering along this trail among aged Bristlecone, a visitor with imagination feels himself entering into the Eye of Time.

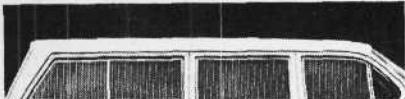
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SIERRA HIKE

(Continued from Page 13)

our heads. The last lap of the loop, Whitney's jagged pinnacle dared us to think we could assault it with impunity. Timberline Lake was the last wood-camp. After the jewel-like setting of Guitar Lake, the country's physical aspect changed. Patches of snow hugged the north and east sides of the glaciated peaks. Bushy-tailed golden marmots lumbered sluggishly toward rocky dens. From Mt. Whitney's bare talus slopes, we counted ten rock-bound blue tarns shimmering in the sunlight. The silence enfolding these heights was unbelieveable.

Below us, we saw fellow hikers, dwarfed by the immensity of the surroundings, clinging like human flies to the precipitous switchback ascent. Yet the Sierra Crest above us appeared to retreat as we climbed, a sky-borne eyrie. At several points we felt we were hanging in mid-air. A horse and rider hove into view. The animal's rump hung over nothingness as it negotiated a sharp turn. I pressed against the mountain and shut my eyes.

At last, atop Trail Crest, we stopped to view the full-circle panorama. On Mt. Whitney's mighty spine, 14,000-feet high, we were treading on clouds. East of us the Inyo and Panamint Ranges glowed in pink and gold afternoon splendor. Owens Valley fell into a blue haze. Directly below us on the east side of the Sierra, icy blue-black lakes nestled amid beds of snow-ice. Oh, how worthwhile this trip had been!

Descending the 108 steep switchbacks was easier, but we were still 11.5 miles from pine-dotted Whitney Portal. Now the pot of pre-cooked chili beans came in handy. We were starving, and still above the timberline. Camping in a sheltered place among the rocks, we called it a day. Tomorrow we would be down in Lone Pine.

This 80-mile loop trip over the top of the Sierra through an enchanting wilderness had opened up an entirely new world. Indeed, every able-bodied American should experience at least one backpack trip in his lifetime—although ours is going to include more. Next year we will return again to this land of wandering waters. //

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and *Western Ghost Towns*.



SILVER CITY IDAHO

BY LAMBERT FLORIN

WAR EAGLE MOUNTAIN in 1863 was the scene of a bitter rivalry that could end only in the death of one of the combatants. The peak, situated among Idaho's Owyhee Mountains, spawned a creek called Jordan, and all along its steep canyon walls were spectacular veins of rich silver. Two frontier mining towns, Idaho City and Ruby City, had sprung up along the stream only a few miles apart. They were too close together to live as friendly neighbors. Every inhabitant of each town understood from the beginning that one would destroy the other.

As mines were developed and additional lodes discovered, it became clear that most of the richest silver deposits were nearer Silver City. Not only that, some of the force of brutal storm winds which raked both was shunted by encircling sage clad peaks. Stores closed their doors in Ruby City, reopening in the triumphant camp higher on Jordan Creek. Indeed, some business buildings were moved bodily or in sections hauled by teams of oxen. Most important of these ambulatory structures was the immense Idaho Hotel. Selection of a proper new location wasn't easy. The hotel had stood on a slope dropping steeply

away from the street at Ruby. The new site had to match, or the structure wouldn't fit.

Mines in the area around War Eagle Mountain were more than ordinarily spectacular. Gold and silver ores from the Poorman Mine assayed \$4,000 to \$5,000 to the ton. At depths of 100 feet or so, one mass of solid ruby-silver crystals was found. It weighed a quarter of a ton.

It became a regular thing to see three-foot stacks of silver bars piled outside the Wells Fargo building, awaiting shipment to Umatilla by stage. Each bar was strapped in leather containers and the stage had to be reinforced to withstand the heavy load. The road down the mountain was steep and composed mostly of hair-pin curves. Stages didn't last long, reinforced or not. From Umatilla the bullion went down the Columbia to Portland and thence to San Francisco.

The Masonic Hall was one of the first in Idaho. It straddled the creek and a standing, if corny, joke among the miners who entered by the front door and emerged at the rear was that they had "crossed over the Jordan." There were plenty of other impressive

buildings strung along the stream and on several cross streets in the burgeoning city. Near the Masonic Hall was a structure housing the Owyhee Avalanche, a newspaper that swayed the political and social life of Silver City for 67 years. There was an undertaker's establishment which up until a few years ago still held a number of coffins. There were two drug stores, and the emporiums specializing in snake-bite medicine numbered in the dozens. There were large schools and even a library to fill cultural needs. On a hilltop in rather a lonely situation stood an attractive church. It was built in 1896 by the Episcopalians and sold in 1933 to the Catholics. Congregations and parishioners found no set path up the hill as the rocky soil offered access in all directions as long as the scant brush covering was avoided.

In one six-year period Silver City produced \$2,756,128 from just one mine, the Oro Fine, and there were 30 others like it on War Eagle Mountain. But this sort of production couldn't continue for ever. In 1942 the last mine closed and the once bustling city breathed its last. Today it stands as one of the best preserved ghost towns in the country. //

DESERT DISPENSARY

by Sam Hicks

VIZNAGA, or purple hedgehog cactus, can be eaten but it is more a novelty or a survival food than it is a gourmet's delight. It is filling and rather tasty if it is first roasted in a bed of coals for an hour or so until the fiber of its white meat is broken down. It is peeled, sliced in quarter-inch thick slabs cut across the grain, then breaded and fried the same as eggplant. Its nutritional value is debatable.

Cubiertos de viznaga, Spanish for cactus candy, is made by first soaking large, rectangular wafers of the viznaga cactus in a strong lime water solution for approximately one half hour. The wafers are then slowly drained on board or palm fronds placed outside in the night air during the time of year when heavy dew is a certainty. If the wafers are drained under almost any other condition, they harden slightly on the outside, trapping lime water inside the slabs and rendering them useless for human consumption.

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In this month's column Sam Hicks tells how the Mexicans make candy from the purple hedgehog cactus.



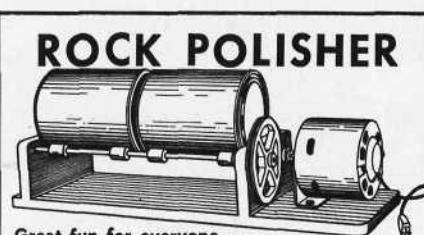
Standard measurements of the ingredients for a batch of cactus candy are ten pounds of soaked viznaga slabs, twenty pounds of panocha (brown sugar) and five gallons of water. The water and sugar are brought to a boil in a large pot over an outside fire, then the slabs are cooked until they become candied, which takes about twenty-five to thirty minutes. They are then lifted from the boiling pot with a wire mesh scoop and spread out on a table to cool.

Conserva always follows in the wake of a bath of cubiertos, and it has long been a popular Mexican dessert. Here again viznaga is used, but for conserva it is cut into cubes or chunks of one-half inch and smaller. This chopped viznaga meat is also soaked in lime water and drained in the identical fashion as cubiertos. After the cubiertos are dipped out of the boiling sugar syrup, about ten pounds of the cubed viznaga is poured into the same pot. This batch is cooked for another twenty-five or thirty min-

utes, but care must now be taken to prevent over-cooking. Prolonged boiling will cause the syrup to harden after it cools, thus changing the taste and spoiling the conserva for all practical purposes. It should be cooked just long enough that, after cooling, the syrup is still liquid with the candied viznaga bits remaining in a state of suspension. While it is still warm it is poured into five gallon honey cans for storage, where it will keep for years.

Conserva is customarily served at room temperature in a bowl or cup and eaten with a spoon. It is sold daily in the stores of small villages and cities throughout Mexico and can be purchased in any quantity from a small helping in a bowl held in the grimy hands of a child to a five gallon can full which weighs about sixty pounds.

Certain regions of the southwestern United States have suffered so long from acute shortages of rain that many of our most picturesque and gruffly interesting species of cacti no longer grow abundantly. The colorful viznaga is one of these species which, as of the present, is definitely not on the increase. Let's save them for photographic pleasure and emergency rations only. **///**



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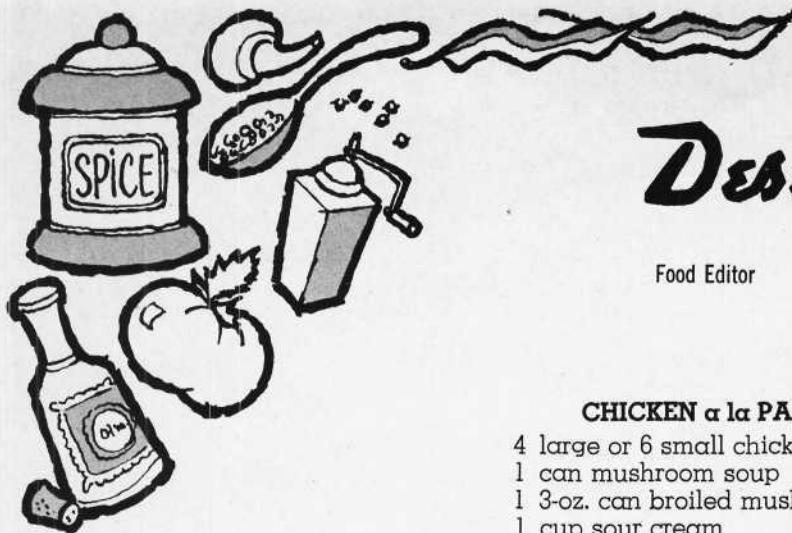
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Desert COOKERY

Food Editor

Lucille Isedale Parslow

ONO-ONO HAWAIIAN CHICKEN

$\frac{1}{4}$ cup butter
4 green onions, chopped, tops and all
1 clove garlic
2 tablespoons flour
1 teaspoon monosodium glutamate
1 teaspoon salt
1 cup Sauterne or white table wine
1 can water chestnuts, drained and sliced
1 can sliced mushrooms, drained
1 can bamboo shoots, drained (optional)
1 can pineapple chunks, drained
3 cups cooked white meat of chicken
Macadamia nuts, chopped

Melt butter. Add onions and garlic; cook until onions are soft. Blend in flour, salt and monosodium glutamate. Add wine, cook until mixture comes to a boil and thickens. Add chestnuts, mushrooms and bamboo shoots. Simmer 5 minutes. Add pineapple chunks and chicken. Cook, stirring as little as possible until thoroughly heated. Serve, sprinkled with macadamia nuts. 4 to 6 portions.

ORANGE SAUCE FOR ROTISSERIE CHICKEN

Truss chickens and place on spit close together. Brush and baste every 5 minutes with the following sauce:

2 cans condensed beef broth
2 tablespoons cornstarch
 $\frac{1}{4}$ cup cut-up orange sections
 $\frac{1}{2}$ cup orange juice
 $\frac{1}{3}$ cup honey
1 tablespoon lemon juice
1 teaspoon grated orange rind

In saucepan, gradually stir cornstarch into broth, add remaining ingredients. Cook until thickened, stirring constantly.

CHICKEN à la PARIS

4 large or 6 small chicken breasts
1 can mushroom soup
1 3-oz. can broiled mushrooms
1 cup sour cream
 $\frac{1}{2}$ cup cooking Sherry

Place breasts in shallow baking pan. Combine remaining ingredients and pour over chicken. Sprinkle with salt and paprika. Bake at 350 degrees for 1 to $1\frac{1}{4}$ hours.

OVEN BARBECUED CHICKEN

Barbecue sauce:
Cook in skillet until yellow, 1 medium onion and 1 clove garlic in 2 tablespoons shortening

Add and simmer for 1 hour:

2 tablespoons chopped parsley
1 teaspoon salt, pepper
1 tablespoon sugar
1 tablespoon sugar
1 teaspoon dry mustard
1 teaspoon paprika
 $\frac{1}{2}$ cup chili sauce
 $\frac{1}{4}$ cup vinegar
 $\frac{3}{4}$ cup water
1 $\frac{1}{2}$ tablespoons Worcestershire sauce

To barbecue the chicken:
Cut up for frying one 3 lb. chicken. Sprinkle pieces with salt and place in shallow roasting pan, skin side up. Pour $\frac{3}{4}$ cup sauce over chicken and bake at 325 degrees for $1\frac{1}{2}$ hours. Turn oven control to 375 degrees, pour rest of sauce over and bake 30 minutes. If not brown enough chicken may be placed under broiler the last 4 or 5 minutes.

TROPICAL CHICKEN

Cut up frying chicken, salt, pepper, flour and place in shallow pan. Melt $\frac{1}{2}$ cup butter and drip over chicken. Mix 1 $\frac{1}{2}$ cups crushed pineapple, 2 tablespoons lemon juice and 2 tablespoons soy sauce. Pour over chicken and bake slowly about 300 degrees for 1 hour or until chicken is tender. You may add a little Sherry to sauce for added flavor.

ORANGE CASHEW CHICKEN

2 oranges
1 tablespoon sugar
4 chicken breasts
Salt and pepper

$\frac{1}{3}$ cup flour
 $\frac{1}{4}$ cup salad oil
1 teaspoon grated orange peel
1 cup fresh orange juice
 $\frac{1}{3}$ cup water
1 tablespoon cornstarch
 $\frac{1}{2}$ teaspoon nutmeg
 $\frac{1}{4}$ teaspoon salt
1 teaspoon sugar
2 tablespoons butter
1 cup dairy sour cream
2 tablespoons sliced cashew nuts

Cut the oranges in cart wheels and sprinkle with 1 tablespoon sugar. Season chicken breasts with salt and pepper and coat with flour. In skillet, brown chicken in hot oil. Place in shallow baking dish. In saucepan, combine orange juice, water, cornstarch, nutmeg, salt, 1 teaspoon sugar and butter. Bring to boil, stirring constantly, reduce heat and simmer for a half minute. Pour over chicken breasts and bake at 350 degrees for an hour. Drain orange cart wheels and stir half of them into the sour cream, then spoon over chicken. Return to oven for 8 or 10 minutes. To serve, sprinkle chicken with cashew nuts and garnish with remaining orange pieces.

GOURMET CHICKEN

Soak 6 frozen chicken breasts in milk for 4 hours, or until thawed. Roll in flour with salt, pepper and paprika. Brown delicately in butter. Place in baking pan and cover with $\frac{1}{2}$ can consomme, 1 crushed garlic clove and $\frac{1}{2}$ cup white wine. Cook slowly, about 350 degrees for 1 hour. Take out of oven and cover with $\frac{1}{2}$ can warm consomme mixed with $\frac{1}{2}$ pint sour cream and 1 can sauteed button mushrooms. On top of each piece of chicken, place 1 dessert spoon of finely grated lemon peel. Bake 20 to 30 minutes longer.

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NEW PUBLICATION—"Old Time Bottles," 74-page guide book for collectors, pictures and values of over 300 ghost town bottles, \$2. Old Time Publishing Company, 3915 Rivercrest, Salem, Oregon.

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LETTERS FROM OUR READERS

Lost Mine Experts

To the Editor: I am an old man and never recall having written to any magazine about an article, but in your June issue you have Jim Dollar's *Lost Mine* by Kenneth Marquiss. I have not come across this chap before. He has something. He has style. It's new and original. It rings true. It shines up the whole issue. That fellow in 30 years has hit more than one dry hole! Let's hear more from him in DESERT. Congratulations for turning up a new one.

PETE REASONER,
Morro Bay, California

Editor's Comment: You are right. Ken Marquiss has struck more than one dry hole. Watch for more from him in the near future.

To the Editor: After the Lost Dutch Oven Mine story was published a few years ago, there was quite a stampede for the Clipper Mts., and most of us camped at the spring. I even chartered a plane to look over the area, but couldn't see anything from the air, except a lot of jeep trails made by modern prospectors. Seven miles south of the spring was the whistle stop of Danby! There was a small grocery and gas station there run by an old geezer who sold most of the supplies to the prospectors. He did quite a lucrative business for a few months, until the prospectors started to figure things out. When they challenged the old geezer, he finally admitted he'd concocted the lost mine story in order to do a little business because the cars on that high speed road never stopped. The old geezer died three years ago.

I don't wish to discredit Kenneth Marquiss' story about Jim Dollars Jimdandy (DESERT June, '64) but as his story has the starting point at Danby, I want to challenge him with one question. Who owns the trading post at Danby NOW???

JACK YEAGER,
Minneapolis, Minnesota

Bugs About DESERT . . .

To the Editor: I am a naturalist and a scientist (Entomology) and I take all available Nature Science publications including National Geographic, National Parks, Pacific Discovery, etc. Each is valuable to me and is read carefully, but DESERT takes first place in unique and rewarding articles. There is a flavor of the undiscovered wilderness that even the Wilderness Magazine doesn't have. Please keep the transparent reality of DESERT untarnished. Your efforts so far are perfect and it is a red letter day when DESERT arrives.

MARGARET MCCLARY,
Research Fellow in Entomology of the
Academy of Natural Sciences of
Philadelphia

Query for Cookery

To the Editor: Don't ever drop DESERT Cookery! Do you have a recipe for Pueblo Bread—the kind that is sold in Cochiti Pueblo? I would like to have it.

We noticed that Jack Pepper's color photo of Rainbow Bridge in the April Utah issue of DESERT was honored in the 13th Annual Edition of "Western Printer and Lithographer."

MRS. ROBERT CLARK,
San Jose, California

Editor's Comment: Perhaps a reader can send us the Pueblo Bread recipe. We share credit for the photo honor with DESERT's printer, Los Angeles Lithograph Co.

New Angle on the Mangle

To the Editor: In last month's Letters, you suggested that botanists take another look at the Mangrove in view of the superstitious belief of a Baja native that it grows in fresh water. Would you consider an uneducated opinion such as this comparable to that of one of the most informed botanists in the country?

MORGAN MILLER,
San Francisco, California

Editor's Comment: If the very existence of the most informed botanist in the country were dependent upon his knowledge of mangrove habits I would consider his opinion comparable to that of an uneducated native similarly dependent.

The gentleman in the photograph below is Don Jose Gorosave, a well-educated Mexican who has lived in Mulege for 77 years. Mr. Gorosave is able to vouch that the mangrove beside him, on the banks of the freshwater river, has never tasted of salt water. C.P.



Letters requiring answers must enclose stamped, addressed envelopes

German Indians?

To the Editor: The Indian Legend and Bit of German History in June '64 DESERT created quite a bit of wonder and speculation here. Is it possible these Germans were the engineers that built the great irrigation system used by the Hohokam Indians? Wormington's book *Prehistoric Indians of the Southwest* referred to one irrigation ditch 10-feet deep, 30-feet wide and 150 miles long. Engineering and supervising such a project would require direction by a people of more advancement than we credit to the Hohokam Indians.

JESSE M. MANN,
Monte Vista, Colorado

Editor's comment: The article was read on David Starling's radio program over KFI, Los Angeles, and caused quite a stir there, too. Perhaps additional ideas will be contributed by readers, but without any specific archeological findings, we can only speculate. C.P.

Who's Afraid? . . .

To the Editor: I recently subscribed to your magazine and really enjoy it. The Abominable Sandman (July '64) is on our list and we'll head for Borrego on our next vacation. We're prepared to meet this mysterious creature—we're also prepared to run!

LUCY RODGERS,
Ridgecrest, California

Insect Aside . . .

To the Editor: I am a college student and would like to get a summer job picking ladybugs for the Ladybug Lady as described in the June issue of DESERT. Where may she be reached by mail?

BEN JERREMY,
Palo Alto, California

Editor's Comment: Name and address of the Ladybug Queen is: Miss Marcella Nelson, LADYBUG SALES INC., P.O. Box 771, Marysville, Calif. However, her base of operations is located at Gridley, a small town a few miles north of Marysville.

Re Lost Mines

To the Editor:

In the wake of Captain Anza
Rode too many a man
Who hastily hollered, "Bonanza,"
When he had but a Flash in the Pan.

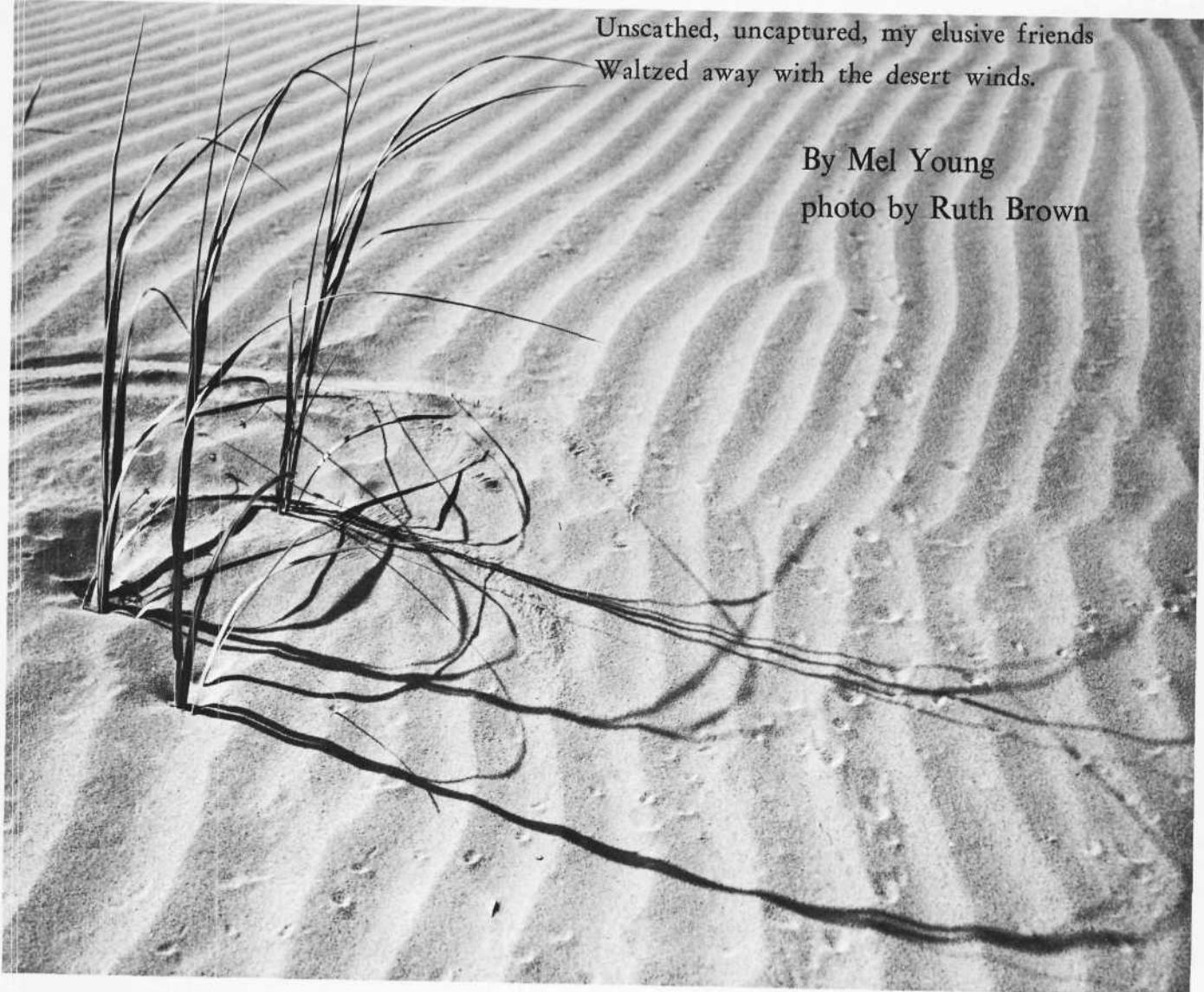
VICTOR STOYANOW,
La Jolla, California

The Desert's Endowment

There was a poem I wanted to write;
It faded out on a desert night.
There was a song I wanted to sing;
But the melody was off on a thrush's wing.
There was a dream I wanted to share;
It was wafted away on the desert air.
My poem, my dream, my unsung song
Are running free where they belong;
In their natural habitat
From whence they sprang
And that is that.

Unscathed, uncaptured, my elusive friends
Waltzed away with the desert winds.

By Mel Young
photo by Ruth Brown



COOL, COOL WATERS



During the hot summer months man's fancy turns to the cool, cool waters of the West. Even if you are not a boating enthusiast the lakes, rivers and streams and the surrounding scenic areas offer ideal places to just relax and forget the cares of the world. The below back issues of DESERT MAGAZINE, which also contain many other exciting articles, tell about some of the cool, cool waters of the West.

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SALTON SEA BOATING, FISHING GUIDE,
March '63

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